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ORIGINAL ARTICLES.

ADDRESS OF THE CHAIRMAN OF THE SECTION OF OBSTETRICS AND DISEASES OF WOMEN, OF THE AMERICAN MEDICAL ASSOCIATION, READ JUNE, 1883.

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PART I.

Mr. President and Gentlemen of the American Medical Association:

The position with which you have honored me requires, by ordinance, that a *resumé* of the so-called advances in our special department should be made the subject of this address. This rule has not been observed for the past two years, and would now, perhaps, "be better honored in the breach than in the observance; but being a law-abiding subject, the writer has chosen mainly to comply with it, and will serve you an "olla podrida," containing some recent items of interest, seasoned with personal views upon other subjects, concerning which there is much difference of opinion among the profession. Seen by the light of present teachings, some of these opinions may be deemed heretical; they are certainly conservative, and perhaps it is well, amid the rush and excitement of our modern mode of life and thought, that there should be an occasional protest against the speed with which all earlier views are left far in the background, lest something of real value should be lost and forgotten.

Dr. John B. Hunter, at the close of an article published more than a year ago, said, "The triumphs of gynæcology have been gained almost entirely in the field of surgery." Accepting this dictum, we shall first direct attention to some topics in Gynæcological Surgery.

Two years ago my predecessor, Dr. J. R. Chadwick, when more ably discharging the duty which now devolves upon me, referring to Emmet's operation (a name which seems preferable to the long Greek derivative), stated that "it could hardly be said to have passed from the stage of novelty to that of criticism; that it was destined to be a fertile topic for several years to come, when it would be assigned to its proper sphere, and cease to excite discussion." This was truthful utterance. Our journals, native and foreign, have teemed with cases, papers and criticisms. Prolonged observation has shown that undue influence was attributed to the lesion, and experience has proved, that the relief claimed to follow the operation has not been uniformly attained. A more definite understanding of the conditions really requiring it, and the limits to which it should be restricted, as well as a more just appreciation of its real merits, has thus been attained. As a consequence, medical opinion now indicates with tolerable clearness its permanent status and scope, even if all the conditions are yet fully determined. Dr. Emmet's early statement, "In every instance where laceration is evident, and where enlargement of the uterus still remains, or where the woman suffers from neuralgia, I consider the operation necessary, notwithstanding the parts may have completely healed;" led to its performance in many cases where it was unnecessary, and in which it failed to relieve. A reaction followed the first enthusiastic reception and adoption of the measure, in this country, and sharp, and sometimes unjust criticisms came from abroad.

As an illustration of the truth of the statement that reflex nervous disturbances do not depend upon this lesion, when accompanying it, and may[1] be cured while it still exists, a brief abstract of a case reported by a noted New York gynæcologist, a few months since, will be presented. It occured in a woman 39 years old, who had given birth to a child eighteen years before, and had suffered since that time from pain in the sacrum, right groin, and down the right thigh, with migraine, nausea, and vomiting at the time of menstruation, which function was unduly prolonged. She had been many years under the care of a gynæcologist without benefit. A large bilateral laceration of the cervix existed, with surfaces and angles dense and cicatricial; the movement of the uterus was slightly impeded, and, in the vaginal vault, on the right, closely connected with the upper angle of the rent, was felt a flat, hard, immovable disk, pressure upon which caused pain in the groin, and down the right sciatic nerve. Preparatory to the operation, she was treated locally by hot water irrigations, applications of iodine, etc., and afterward, by the use of tampons, which produced so much disturbance that they were discontinued. Her physician then began the use of galvanism, experimentally, placing the negative pole against the induration in the vagina, and the positive over the right ovarian, and the trochanteric regions alternately. A light current was at first employed, gradually increased in strength for fifteen to twenty minutes, the poles being occasionally reversed. The pain was much relieved by the first application, and the patient expressed herself as feeling easier than for weeks before. The sittings were continued every second day, and the time of

[1] *American Journal of Obstetrics*, Oct. 1882, pg. 909.

use extended to one-half or three-quarters of an hour, the strength being gradually increased to sixteen cells; and during the week preceding menstruation a sound connected with the negative pole was introduced into the uterus for half the time. The succeeding menstruation was attended with scarcely any pain in groin or side, and with migraine only for the first day. The galvanization was continued every day during the next interval, and was followed by menstruation entirely free from pain, or migraine. The application was then made less often. and two more painless periods passed. The patient attended a ball and remained until 3 o'clock A. M., without any unpleasant results. "To all intents and purposes," says the narrator, "she was cured," The plastic exudation had disappeared, hastened, he thought, by the hot vaginal irrigations which had been continued. Of the influence of the galvanic current in producing this result he says nothing. For a month longer the doctor debated, "whether he should not leave well enough alone," but finally concluded to operate. He states that while he has often used the galvanic current to reduce a hyperplastic uterus, he had never before employed it as a uterine application in reflex hemicrania. To the writer such a result is not new or surprising, as for many years he has found it efficient in the same conditions associated with uterine trouble, and a year ago treated and relieved similar symptoms supposed to depend upon cervical laceration.

While there appears to be satisfactory evidence that the great majority of cervical lacerations are attended by no symptoms which can properly be attributed to them; that some even of a severe character have been found by competent observers, which had existed through several pregnancies without producing any disturbance of health; that the operation will not, with certainty, remove uterine hyperplasia, or hypertrophy, and experience has proved it unreliable for the relief of presumably dependent reflex nervous disturbances, and while it is still a mooted point whether it is warranted by the existence even of hereditary tendencies which make it possible that epithelioma may spring from the cicatricial tissue; there yet remain exceptional cases (not perhaps as frequent as Dr. Munde s estimate makes them, twenty-five per cent. of al') of stellate lacerations, where decided local symlptoms are present; and deep bilateral rents with co-existing ectropion, hypertrophy of cervix, and consequent local symptoms, which are speedily and effectively cured by reunion of the lacerated cervix. In such, it is so marked an improvement upon cervix amputation, or the use of the actual, or potential cautery, that for the relief of these alone, the gratitude of the profession is due to the deviser of the operation, to which in honor his name is justly given.

Another operation which has been tested for some years is that of Dr. Battey. Most of the indications, which have been claimed to warrant it, are now generally admitted. Some doubt still exists respecting its ultimate results when performed to check uterine hæmorrhage produced by myomata. It has appeared to be successful in interstitial and subperitoneal fibroids, unless the latter are so large as to prevent the operation; but its results appear more doubtful in the submucous variety, as the hæmorrhage has sometimes returned, after a check of a few months. Even with this doubt, it is indicated in much reduced patients, where enucleation could not be borne. Caution must also be observed where the tumors have been treated by ergot, as there is, at times, a central disorganization and sloughing, which may lead to blood poisoning after the operation. There is also some diversity of opinion concerning its efficacy for the relief of epilepsy, or hystero-epilepsy, and mania, seemingly dependent upon, or associated with, ovarian troubles. Dr. Goodell advocates the operation in such cases of insanity, and quotes Esquirol, to the effect that derangements of menstruation are causal in one-sixth of all cases due to physical causes.

Mr, Lawson Tait, of Birmingham, England, was one of the trio, who each, independently of the others, originated and performed this operation in the months of July and August, 1872. It was published, at that time, only by Dr. Battey, whose name it justly bears. Mr. Tait has since had a much wider field for experience than our modest, but inventive and skillful American surgeon, and quite recently has astonished the profession, abroad and at home, as much by the boldness and originality of his views, as by the remarkable success which he has attained. His deductions controvert some long-established opinions, and whether these are accepted or not, his researches afford clues, which followed, promise to lead to a more accurate understanding of some hitherto obscure pelvic affections. His earlier operations were performed for the relief of hæmorrhage from myomata, and he then removed only the ovaries, but afterward included the fallopian tubes also, an addition which he deems of great importance. He published in July, of last year[1] ,remarks upon the diagnosis and treatment of chronic diseases of the ovaries, in which he advanced the opinion that abdominal operations in the hands of an expert, are so little dangerous as to be justifiable for relief from long-continued suffering; and that the earlier usage of deferring operative interference until life was immediately threatened, was an error. He also states, that all the evidence before him showed the phenomena of menstruation to depend upon the fallopian tubes, and not in the least upon the ovaries; that the tubes are involved in all cases of ovarian disease, and, in the large majority, are the principal seat of the difficulty; that many cases of abnormal menstruation can be relieved in no other manner than by the removal of the tubes and ovaries, and that the proceeding is justifiable; that, in his last series, of thirty-five cases of chronic ovaritis and tubular disease alone, he had lost but one, and, the operation being yet in its infancy, he believes this percentage of mortality can be materially lessened. He claims, also, that these recent operations for oöphoritis have done more to enlighten us upon the physiology and pathology of ovarian disease than all other previous sources of information; that they have also shown that many of the sufferings from pelvic symptoms,

[1] *American Journal of Obstetrics*, July, 1882.

which have been referred to the ovary, are really dropsy, inflammation, and suppuration of the tubes, producing sterility, and a host of painful ailments which make life a burden. The diagnosis, he allows, is not always clear. Examination will often reveal to the practiced finger, in the vaginal cul-de-sac, a fixed tender mass composed of the enlarged and probably adherent ovary, and of the occluded and distended tube; and the peculiar sickening pain felt when this is touched, will afford conclusive proof as to its nature. When this evidence cannot be attained, the presumptive diagnosis must rest upon the history of the case and the symptoms manifested.

Dr. T. A. Emmet, at a meeting of the New York Academy of Medicine, last December[1], stated that he had learned orally from Mr. Tait, that in cases of obscure pelvic inflammation, characterized by severe symptoms, and which did not yield to treatment within a reasonable length of time, he opens the abdomen and invariably finds this dropsical condition of the tubes, which are distended with either serum or pus. The removal affords immediate relief, and it is the only means which can. Dr. Emmet also added that the improvement which he had personally observed to follow Mr. Tait's operations, had been something almost beyond conception.

In a paper read before the New York Academy of Medicine, last December, Dr. T. G. Thomas said, in reference to the views of Mr. Tait, that while he did not feel warranted from his own observation and experience in accepting them fully, he thought there was sufficient of truth in the statements to make the essay the most valuable to the gynæcologist which the present decade had produced. He also mentioned another proposition of Mr. Tait, which was not included in the paper, but orally communicated to Dr. Emmet: That tubal dropsy and ovarian disease are often the real cause of recurrent peritonitis or cellulitis, which is produced by an occasional discharge of the purulent contents of the tubes. Dr. Thomas reported four cases in which he had operated, where great menstrual derangement existed, together with recurrent peritonitis and cellulitis, conditions which the operation showed to have been produced by the state of the tubes described by Mr. Tait. In three of these, the result was very satisfactory; the fourth patient was in an exceedingly reduced physical condition from recent attacks of peritonitis, when the operation was performed, and died on the sixth day, from an insidious attack of the same disease which came on twenty-four hours after. More recently he has operated upon a fifth case, the patient completely bed-ridden, and required no less than ten grains of morphine, subcutaneously, per day, to relieve the intolerable suffering. The ovaries and tubes were again found in the typical condition described by Mr. Tait. He also remarked that no one of the five patients upon whom he had operated would not have considered death a welcome relief from their sufferings.

It appears singular that this condition has not been before noted or suspected; but it is stated that since the publication of these facts, a well known microscopist of New York has said, in his examinations he had frequently noted distension of the fallopian tubes. Mr. Savage, of Birmingham,[1] also takes the ground that hydro and pyosalpinx are met with quite frequently, and states that the first effect of the inflammation is to close the uterine or fimbriated extremities of the tubes, allowing collection of the abnormal secretion; thinks that the relatively large amounts o areolar tissue in the walls of the tubes, as compared with the uterine wall, accounts for the frequent presence of pus in the former. He says the diagnosis must often be presumptive, and based upon the physical signs and clinical history. The operation of removal is often difficult and tedious, from the firmness of adhesions, and the risk of the escape of the fluid contents in the pyosalpinx. The results of such conditions when left to themselves, may be: First, resolution or absorption, which is very improbable when pus is present, and which would not affect the results of former adhesions. Second, bursting into the uterus, or vagina, which *may be* curative, or into the peritoneum, which would be almost certainly fatal. The same physician, later,[2] calls attention to the comparative frequency of recurrent attacks of pelvic inflammation caused by pyosalpinx, and thinks that many cases of supposed pelvic cellulitis hitherto regarded as incurable, can be relieved by the removal of the tubes.

Dr. T. G. Thomas recently introduced a patient at the clinic of the College of Physicians and Surgeons, who was suffering from recurring pelvic peritonitis, and in whom he deemed these attacks due to the cause pointed out by Mr. Tait, as both ovaries and tubes were enlarged. The first attack of peritonitis had been light, the second more severe. He remarked that "although the tubal enlargements could be apparently made out with unusual clearness, still the diagnosis was not a positive one, and he did not think operation advisable, because the woman was not suffering to an extent warranting so radical a procedure." He added, "I cannot impress upon you too strongly, that the dangers of this operation are very great, and the great fault I have to find with Mr. Tait is, that he makes too light of them altogether. I cannot believe that the high standard of success which he has so far maintained, will be kept up in the future." This opinion corresponds with that expressed in an able paper read by Dr. G. I. Engleman before this Association in 1878, in which he faithfully depicts the difficulties and dangers of Battey's operation; but Mr. Tait does not always "make light" of these difficulties, for in a paper published in February of this year, he says, speaking of the hydro and pyosalpinx cysts: "Generally they are much smaller, holding only a few ounces, and then their removal, by reason of dense adhesions, constitutes by far the most difficult class of cases I ever have to deal with. Why the simplest of all, the removal of a parovarian cyst, should be classed as an 'ovariotomy' and held up for admiration, and these most difficult cases dubbed 'Oöphorectomies,' and held up to scorn, I cannot imagine."

[1] *New York Journal of Medicine*, January, 1883.

[1] London *Lancet*, January 6, 1883.
[2] Birmingham *Medical Review*, January, 1883.

Dr. P. Harris' paper upon the revival of symphysiotomy in Italy,[1] is worthy of notice from the remarkable success which attended the operation. Between 1866, and December, 1880, fifty cases are reported, with eighty per cent. of maternal recovery and eighty-two per cent. of living children. Nine of the ten women who died were delivered of living children, and eight of the nine mothers who bore dead children, recovered. Of the children lost, five were shoulder and breech, and four vertex presentations. In only one instance did mother and child both die, and this was a case of back presentation, operated upon on the fourth day of labor. There have been three additional cases since, in which all the mothers recovered, but two children were lost. All the operations were performed upon rachitic subjects, the deformity being generally antero-posterior contraction. The separation at the pubis amounted to about two inches, which was obtained without any effort, and without lesion of the sacro-iliac synchondroses. An immovable dressing secured firm reunion of the parts in all who recovered? No after pelvic disease occurred, and the women were in good health. In one case only, vesico-vaginal fistula followed, which was easily cured. The operations were performed principally by Professors Morisani and Novi, of the University of Naples. The section is made subcutaneously, with a probe-pointed sickle-shaped bistoury; an incision being made above the pubis, the knife is slowly passed behind the symphysis until it reaches the pubic arch, when its cutting edge is brought to bear upon the ligaments, and they are divided from below upward; the pelvis is not forced open, the fœtus not dragged upon, but when the head presents, the conclusion is generally left to nature. The incised part is treated antiseptically, and by irrigation in warm weather, and as soon as convenient the bones are kept in opposition by the immovable dressing. The usual time for complete pelvic restoration was from forty to fifty days. Dr. Harris remarks that "this more extensive test upon the living has proved that greater pelvic mobility exists than John Hunter demonstrated upon the cadaver;" each inch of pubic separation, though increasing but little the sacro-iliac, adds to the transverse and oblique diameters, and makes it possible, if time is allowed, for the head to mould itself sufficiently to pass; this result is shown by the statement that forty-two out of the forty-six vertex presentations were thus delivered alive, with a recovery of eighty per cent. of the mothers. Dr. Harris states that the Porro operation in Italy saved 45.5 of the women and 77.5 of the children; and I find elsewhere that he has stated,[2] that out of the last twenty-eight cases, from May, 1879, fifty per cent. of the women were saved. But the two can hardly be compared, as the sphere of symphysiotomy is confined to those cases having a conjugate of 2⅝ inches (sixty-seven millemeters), and upwards; cases not very uncommon, where the pelvis is somewhat too small to permit the birth of the child, and in which premature labor would save it, did opportunity offer. With a diameter less than 2⅝ inches, other means must be adopted.

Dr. Montgomery, of Philadelphia, not long since published conclusions which he had drawn from an analytical study of this subject, which are here briefly stated. That craniotomy is never justifiable, since it is our duty to try and save both mother and child. That in pelvis of a conjugate of 3.25, or over, forceps can be employed, when 2.75 or upwards, version; 2⅝ or over, symphysiotomy, and in less than 2½, the Cæsarian section, performed reasonably, offers better results for the mother. This should not, however, be the old operation, but the modification recently introduced, I think by Sanger,[1] which has been found more successful than the old method; and a case is recently recorded which was operated upon by Dr. Leopold, in Germany,[2] in which both mother and child were saved.

In a limited number of cases, when the os is dilated, laparelytrotomy may be preferable to uterine section. In all lesser degrees of distortion, when opportunity is afforded or in subsequent pregnancies, premature delivery should be induced.

EXTRA-UTERINE PREGNANCY.

Some important advances have recently been made in the treatment of extra-uterine pregnancy up to a certain stage of its existence, which appear to offer a safer and surer path out of this difficulty than previously discovered. The first instance of this treatment which the writer has found recorded, was reported by Dr. J. C. Reeve, in 1879.[3] In this case the diagnosis was positive, and the time about the end of the third month. Faradization was used as strong as it could be borne, for nine days successively, for about ten minutes each session; one electrode upon the tumor in the vagina, the other, sponge covered, carried over the external abdomen. Ten days after the last application the patient was decidedly better, and in a month the breasts had become flaccid and the tumor gradually decreased in size. This was successful, although accomplished with inferior apparatus, and more than necessary disturbance. Cases have been reported within two or three years, by Drs. Lusk, Bache, Emmet, and others, where the diagnosis was regarded as satisfactory, and similar treatment was successful. Dr. T. G. Thomas last year,[4] in a paper upon this subject, fully discussed the means of diagnosis, and related the results of his own experience in twenty-one cases. Six of these were treated by galvanism, and all recovered. His conclusion is, that if such a tumor be discovered, and its nature tolerably settled before the fourth month, the destruction of the fœtus by galvanism should be preferred to any other method of treatment. If there should be error in diagnosis, it could do no harm, if diagnosis were correct, experience proved it effective. Dr. Garrigues remarked that it had been successful up to the middle of the fourth month in every case in which it had been employed, and he thought it could be used with advantage at any period of fœtal life. The last communication upon this subject was from Dr. A. D. Rockwell, the operator in many of

[1] *American Journal of Medical Sciences*, January, 1883.
[2] *British Medical Journal*, April 21, 1883.

[1] See paper by Dr. Garrigues, *Am. Journal Obstetrics*, May and June, 1883.
[2] Archives fur Tynaskel, xix p. 400.
[3] Trans. Am. Gynæcological Society, 1879.
[4] " " 1882.

Dr. Thomas' cases,[1] in which he reports seven cases, with the method of use of the agent. His first case was one of tubal interstitial pregnancy at almost three months, and was perfectly successful. More recently he had treated three which had been published, and three more which had not. The results in all, more thoroughly establish the value of the treatment. Two of these will be briefly epitomized to show the method. His fifth case was declared by Drs. Thomas and Emmet to be a combination of both intra and extra-uterine pregnancy, and was about two and a half months advanced. There was a tumor of the size of a pullet's egg distinctly perceptible two inches to the left of the median line, and nearly on a level with the pelvic basin. It could be moved from Douglas' cul-de-sac towards the margin of the ribs, and it gradually increased to the size of a billiard ball. The negative pole of a galvanic battery was brought into contact with this growth through the vagina, the positive, a large flat electrode placed upon the abdomen, the object being so to diffuse the current as to produce the least possible action upon the abdominal muscles. The maximum strength employed was eighteen cells, or power of twenty-four volts, used with rapid interruptions. This was repeated four times in six days.

The tumor not only diminished perceptibly in size, but changed its position an inch or two. Since that time it has gradually grown smaller, until now, three months after, it can hardly be detected; at the same time there is now developing, in the uterus, a six months' fœtus.

The sixth case was about four months advanced, a current of twelve cells (about 16 volts) was used, interrupted for ten minutes, then quickly increased for one minute without interruption. Great care was exercised, in this case, on account of the increased distention of the fallopian tube from the more advanced stage, and the consequent danger of rupture. A second application, the following day, concluded the treatment. Two weeks after the tumor had decreased one-half, and, after several months, cannot be perceived by external examination.

In the last case, the pregnancy had advanced to the third month, and the tumor, about the size of a child's fist, was movable, and could be distinctly felt, both from without and within. An anæsthetic was given, at the advice of Dr. Emmet, for fear of cyst rupture from involuntary movements; a current of 16 volts only was used, and repeated three times afterward, at intervals, during six days. The contour and seat of the tumor were changed after the first application, and it rapidly decreased in size. The treatment was repeated afterwards to accelerate the process of absorption.

This method of treatment is safe and simple, only requiring caution, in advanced cases, to avoid rupture of the sac by too much strength of current. Galvanism is decidedly preferable to Faradism, as being more certain. Catalytic effects pertain only to the former, and the changes produced by this action, in organic bodies, continue long after the current has been used.

[1] New York *Medical Record*, February 17, 1882.

POST PARTEM HÆMORRHAGE.

A reference to some recent suggestions for the relief of severe cases of post partem hæmorrhage and of the collapse which follows: The hypodermic injection of ether has been lauded in extreme acute anæmia. It appears, however, only to act as a temporary stimulant, of the same character as the introduction of a small quantity of ammonia into a vein. Professor Hayem's experiments on artificially exsanguinated animals, recently detailed at a session of the Paris Academy of Medicine[1], prove that no effect is produced except a temporary excitation of the heart beat, while the use of defibrinated blood, in many cases, prevented a fatal result.

Professor Chahbazian, of Paris[2], extols an alkaloid of ergot, called ergotinine, which is prepared by M. Tanret, of Paris. Only three grains of this can be obtained from a pound of the ergot. One-fiftieth of a grain is dissolved in twenty minims of alcohol or chloroform, and five to ten minims of the solution injected hypodermically, to be repeated, if necessary, but never to exceed twenty minims in all. He states that it acts very speedily and energetically, uterine contraction following its use in from two to five minutes.

Dr. Langay, of Paris, says that he has found faradization the speediest and most effective means of producing instant and energetic uterine contraction in cases of this difficulty.

Dr. J. F. LePage, in a recent article[3], refers to an old but now neglected method, auto-transfusion, in acute anæmia from post partem hæmorrhage, and believes that where patients are not in articulo mortis, it will prove successful.

It is also again recently referred to by Mr. Percy Boulton[4], who, after enumerating the ordinary means, including hot water 110° to 120° injected into the fundus uteri by a syphon syringe, says, should symptoms of collapse appear, raise the foot of the bed to an angle of 45°, apply a sinapism over the heart, and bandage firmly legs and arms, beginning at the extremities, etc.

Confidence in the practical efficacy of direct blood transfusion, in cases where death appears imminent, has very much lessened in France, Germany, and England, and Dr. Lusk, one of our late authorities, says, that although theoretically it is the most rational method of treatment—practically it is unsatisfactory. Dr. Matthews Duncan, at a meeting of the London Obstetrical Society, last January,[5] spoke of transfusion as merely a hopeful proceeding, remarking that patients who survived it were often spoken of as being saved by it, which was a manifest mistake. In many cases it has caused death, and most of the difficulties and dangers were produced by the attempt to transfuse blood.

These estimates are due partly to the uncertainty of obtaining a blood supply, and to the unpleasant symptoms which often, and the fatal results which, at times, follow direct transfusion, and partly to the

[1] *British Medical Journal*, February 17, 1883.
[2] *London Lancet*, January 1, 1883.
[3] *British Medical Journal*, April 22, 1883.
[4] *London Medical Times-Gazette*, May 5, 1883.
[5] *British Med. Journal*, January 27, 1883.

delicate instruments and manipulations required. To mediate transfusion may be objected the same want of blood supply, and the loss of time occupied in defibrinization and re-heating, the chance of embolism from imperfect separation of all fibrinous particles, and the possible danger of contamination from bacteria during the process of whipping. Other fluids have been suggested, such as fresh milk, by Dr. Thomas; but this is found open to grave objections, and has been but little used. Many years ago weak saline solutions were suggested where blood could not be obtained, but physiological objections were strongly urged against the measure. Dr. Barnes states that they were employed, some years since, by Drs. Little, Woodman, and Hickford, in England, and that one of the cases of Dr. Woodman recovered.

Mr. Schwartz published, about two years ago, the result of experiments made upon artificially exsanguinated animals, with the conclusion that a saline solution thrown into a vein would relieve the phenomena which accompany an extreme degree of anæmia. The first application of this to the human subject, in Germany, as far as records are accessible to the writer, was made by Dr. J. J. Bischoff, in 1881,[1] in a case where death seemed imminent from hæmorrhage; who injected into the left radial artery, on account of the difficulty of finding superficial veins, about forty ounces of a solution of common salt, six parts to one thousand, with the addition of a few drops of lye, as no soda was at hand. This was allowed to flow slowly in, from a receptacle elevated a little above the arm, and an hour was occupied in the process. During this time the pulse fell from 156 to 122, and rapid improvement of the patient was observed, followed by recovery. None of the unpleasant symptoms of oppression, which attend blood transfusion, were manifested. Schwartz has recently published his conclusions more fully,[2] in which he states that death from cessation of the circulation is due not so much to the great diminution of the blood globules, as to the disproportion between the size of the vessels and their fluid contents, and that the latter is safely and surely remedied by injections of weak alkaline solutions. The minimum quantity to be administered to an adult should be about five hundred cubic centimeters (about seventeen ounces). He also reports a violent hæmorrhage following the removal of uterine cancer, where the pupils were insensible, consciousness lost, etc., where he injected one thousand cubic centimeters into the median vein, with the most satisfactory result. He mentioned five other cases which were reported by Bischoff, Küstner, Kocher, and Kümmel.

Recently it has been again brought into notice in England.[3] Mr. Jennins, resident accoucheur at the London Hospital, reports a case which occurred, last August, in a woman who, after a fall at full period, was attacked with profuse antepartum hæmorrhage, and was collapsed, to a marked extent, when seen. The os was fairly dilated, and right shoulder presenting. The flooding was temporarily checked by hypodermic injections of sclerotic acid and brandy, and, thinking that any attempt at delivery would prove fatal, the median basilic vein was found with much difficulty, and sixteen ounces of a saline solution thrown into it, by means of a common metallic syringe. Signs of animation are stated to have speedily followed, vision, hearing, and speech returned, and the subsequent progress was favorable. The solution here used was composed of common salt fifty grains, chlorate of potash three grains, sulphate and carbonate of soda two grains each, to twenty ounces of water, to which two drachms of absolute alcohol were afterward added.

Mr. Coates related two cases before the Obstetrical Society of London, December 6, last year,[1] both of severe secondary hæmorrhage after labor. In the first it had recurred violently several times, and continued, on the last occasion, for eight hours after the patient was seen by the medical attendant. She was found almost moribund, unconscious, and pulse barely perceptible. The saline alcoholic solution was allowed to flow into the radial vein, the only one perceptible of any size. The result is described as marvellous—sight and consciousness returned, and she was soon able to retain stimulants.

In the second case, the hæmorrhage occurred the ninth day after labor, following labor at stool. Half an hour after, her appearance showed a great loss of blood, which was still flowing in gushes. The uterus was relaxed, filled with clots, and could be felt externally, extending almost to the ensiform cartilage. The os barely admitted a finger. Sclerotic acid hypodermic injections, ice, kneading, etc., failing to arrest the hæmorrhage, she was brought to the hospital. She was much worse after her arrival, and one of Barnes' dilators was introduced, with a view of further examination. Before this could be accomplished her condition became most critical—pulse hardly perceptible, respiration irregular, extremities cold, jactitations, etc. The median cephalic vein was found after some delay, and twenty-two ounces of simple water, at a temperature of 100° F. injected. The pulse ceased to intermit, respiration improved, sight returned, and the uterus slowly but distinctly contracted. The os being now fully dilated, the uterine interior was examined, but nothing found to explain the flooding. As there was still considerable bleeding, the uterus was swabbed out with a mixture of equal parts of a saturated solution of persulphate of iron and water, and an enema of beef tea and three ounces of brandy administered. In a short time she could swallow, and stimulants were freely given. The patient progressed uninterruptedly after this, having no bad symptom except a rise of temperature to 102° F. for the first few days. The narrator thinks that the omission of the salines in no way lessened the success of the injection, and though a fluid of a different specific gravity, and one previously supposed to produce swelling of the red globules, and loss of pigment, the result was wholly beneficial. He also states that he examined the globules microscopically, twenty-four hours after the injection, and there was no obvious alteration in their appearance.

[1] *New York Med. Journal*, February, 1882.
[2] *Berlin Klin. Woch.*, No. 40, 1882.
[3] *London Lancet*, Sept. 16, 1882.

[1] *London Lancet*, Dec. 30, 1882.

Dr. Robert Barnes, referring to this case,[1] said: "That the dynamic condition of the circulation, under such conditions, can be restored, even to a partial extent, by the injection of twenty-two ounces of simple water, is one of the most interesting physiological and clinical demonstrations I have recently observed."

Dr. H. J. Garrigues, of New York, after advocating the injection of defibrinated blood, in place of direct transfusion, closes a short recent article, thus: "When blood cannot be obtained, I should prefer a saline solution as containing no foreign substances, no solid corpuscles—being always attainable, and not liable to decomposition. Table salt is found in every house, and all that is needed is to inject a half per cent. solution of this substance."

It is not improbable that all the cases which have been cited might have recovered without intravenous injection; but as a prelude and adjunct to other measures, where the prostration is so great that stimulants or nutriment cannot be taken or absorbed, this offers a safe and ready auxiliary. The knowledge that such a remedy is always at hand, and that it can be used with safety and decided advantage, appears a great accession to our therapeutic resources in these alarming cases.

FORCEPS.

A few words upon a subject not novel—the frequency of forceps' use now taught, and the existing tendency to the abuse of this valuable aid to the obstetrician. For many years past much thought and labor have been expended upon this instrument. A majority of teachers, and some who are not, have introduced new forms and variations, each claiming some superior quality. Much of this has been undoubtedly due to the increased knowledge of the *rationale* of labor, but the pendulum appears to the writer to have swung too far in this direction. One of the latest additions is the invention to which Dr. Alex. Duke called the attention of the Obstetrical Society of Dublin last year. It consists of tractors, which are applied with the forceps blades, and before they are locked; these can be attached to a belt about the waist of the operator, and with toe-caps upon his shoes, to prevent slipping, the inventor claims an immense gain of power for shortening labor. He considers that there is more chance for the child and less risk to the soft parts of the mother, by pulling the head forcibly through the pelvis than if allowed to remain and mould itself to the outlet. We shall probably next hear of a small electro-motor of one-horse power, so arranged as to do the pulling, and save the operator as well as the mother any exertion.

The contest between the advocates of a judicious use of forceps and those who employ them with unwarranted frequency, has been going on in Great Britain for some years. Arguments for the latter course have been based upon statistics, claimed to show a considerable gain to maternal and a large one to fœtal life from this practice. Statistics possess valuable elastic qualities. Four years ago this evidence was examined and reported upon by the writer with widely different conclusions. Others have drawn the same. Dr. Galabin, from statistics of over 40,000 cases, proved that the maternal mortality when the forceps was used once in ten or twelve cases, was nearly double that which occurred when they were seldom used, while the gain to infant life was only 0.4 per cent.

While this is being written, an address of Dr. Denham, presiding officer of the Obstetric Section of the Academy of Medicine in Ireland, has appeared. In this he cites statistics of the Rotunda Hospital at Dublin, taken from the reports of Drs. Collins, Shackleton, and the more recent ones of Dr. George Johnston, amounting in all to over 39,000 cases. Commenting upon the figures, he says: "It is patent that by the more frequent use of forceps in modern obstetrics much has been done for the relief without adding to the danger of labor." This is a most singular deduction, as the figures clearly show that Dr. Collins, who used forceps in 1.6 per 1,000 women, lost 9.99 per 1,000; Dr. Shackleton, who used them in 14.5 per 1,000, lost 11.8 per 1,000; while Dr. Johnston, using forceps in 82.4 per 1,000, lost 18.98 per 1,000, the maternal mortality being almost double that of Dr. Collins in about eighty times the number of forceps cases, nothing is said of the fœtal life. No one can have a higher estimate of the value of this instrument, when really needed and skillfully employed than the writer, but have we not gone far beyond this, and all rational limits, in instrumental obstetrics? The tendency of present teaching and practice is to send forth young men who are not, and cannot be, skilled in forceps use, with the conviction strongly fixed, that if there be some delay in the second stage of labor, forceps is the immediate remedy.

Dr. Hamilton, of Falkirk, formulated a general rule that the second stage of labor should not be allowed to last usually much more, and sometimes even much less, than two hours; and similar opinions obtain with us. Five years ago the writer heard expressions from members of a society which should be, and is, regarded as of the highest authority, which were so extremely radical as to excite great surprise. It was claimed by one, that if there was a cessation of advance by the head for fifteen minutes during the second stage, forceps should at once be used. Another stated that after waiting a time for nature, even if he knew that in two or three hours more the labor could be successfully completed by her efforts, rather than subject the woman to this additional pain it was the duty of the accoucheur to apply the instrument and deliver at once. There were, however, present those older and of wiser counsel who differed much from these opinions, and suggested that the tone of the discussion needed modification.

Rules specifying any time beyond which the application of forceps should not be delayed, appear to be made rather for the benefit of the doctor, than that of the patient. Time is a very unsafe guide when the interest of mother and child only are concerned. Natural labors are often eight, ten or more hours in the second stage, and terminate in all respects successfully for mother and child. Nature requires time,

[1] *London Lancet*, Jany. 27, 1883.

especially in primiparæ, to mould the head to the pelvic outlet, and at intervals, progress is hardly perceptible. The cause of retardation, and the maternal conditions are the considerations which should influence interference. If impaction is *positively* shown, forceps; if retardation is due to loss of nervous power in the mother, quinine; if to insufficient uterine effort, ergot, discreetly and properly used. But the fashionable usage of the day calls for forceps, whatever the cause of delay. The young physician thus taught will never dare to wait sufficiently long to know what nature can accomplish, because of the vivid picture of impaction, sloughing, death of child, etc., which will rise before his excited fancy. It will be long, if ever, before he learns that such dangers are very much overstated, as my own experience and that of thousands who commenced their work before this forceps craze became rife, can testify. A knowledge of healthy action is necessary to, and must precede an understanding of pathological conditions. He who has never ascertained what nature's forces can accomplish in labor, cannot compare the results of this physiological process with those produced by his own interference, and consequently never will realize that what has been done artificially by his so-called, and often miscalled aid, might have been better and more safely accomplished without it.

An able editorial appeared in the *London Lancet* a few months since, deploring the want of means of instruction in practical midwifery, and urging the necessity of providing increased facilities for this purpose. The writer remarks: "A knowledge of *how* to use instruments is no more, or even less important than the knowledge of *when* to use them, and the latter is more difficult of acquisition than the former;" and again: "Otherwise students go forth with instructions to use forceps when labor is delayed, or at least when it ceases to progress, and great injury, both to patients and doctor, is the result of their ignorance of both the above items."

These words are hopeful indications, since they evince a partial comprehension of the mischievous results which attend the use of forceps in unskilled hands.

What motive can even the *expert* in their use have, to apply the instrument when he thinks labor will be safely ended in two or three hours without interference. Anæsthesia offers relief from pain, without danger, and there certainly is more tendency to after hæmorrhage from hastening labor by the instrument.

What is the reason for thus interfering? Can it be economy of time for other engagements? This motive would not be generally avowed by those who thus act, but it is, at times, openly acknowledged.

Six years ago Dr. West, in his presidential address to the Obstetrical Society of London, used the following language: "There is one point on which I think it impossible to insist too strongly—instruments are to be used and operations resorted to for the sake of the patient and the child, never for the sake of the doctor; and yet I have in years gone by heard men say 'I could not wait any longer; I had this or that to do, so I put on the forceps and got the case over.'"

To-day, in a recent journal, the writer chanced upon the following statement, from one well-known in the profession. Speaking of a case of labor, he says: "As the head rapidly neared its exit, and a few more pains would have expelled it"—suffice it to say he applied the forceps in order to shorten labor by one-half hour, to be in time for another engagement. This gentleman knew that in his hands the instrument would do no harm, but he also knew that it was unnecessary, and the motive for its use an improper one.

It must be remembered that those who are experts in forceps use are very few when compared with the numbers who practice obstetrics. If this is the rule for the expert, it will certainly be the *practice* of the non-expert, and at a cost to female humanity such as elicited the strong language of Dr. Goodell, when he said: "To tell you the truth, such grave lesions to the mother, and for that matter to the child also, are so constantly brought to my attention that I am disposed to accept Baudelocque's dictum, that, take it for all, the forceps has been more injurious than useful to society."

Even if used, as probably it mostly is, really and only for the sake of relieving the mother from some hours more suffering, such relief is often dearly bought, and the attendant, if competent for his duty, has or should have, a power in anæsthesia not only to relieve the pain, quiet complaint, and sustain the patient, but one which will subdue any spasmodic or irregular action, assist in perineal dilatation, and contribute to make delivery safer if not more speedy.

Within a few years the writer has found it necessary at different times to leave two primiparæ just before labor, in charge of different brother practitioners. They had both been trained in the recent practice, and considered themselves fully competent to use forceps. The women were healthy and well proportioned, and the writer feels assured could have been safely delivered naturally, after a somewhat tedious first labor. Forceps were used in both cases. One had a severe double cervical laceration extending to the vaginal junction, the other a perineal rent extending into the rectum, neither of which accidents, of sufficient importance to attract attention, ever occurred in the writer's obstetric practice of over forty years.

In view of such facts, and with the knowledge that they are of daily occurrence, how can one who has delivered many hundreds of women with but sparing use of forceps, and results for mother and child which will compare well with those which any frequent forceps advocate can show, how can such an one avoid a protest against this fashion of the time, in the name and for the sake of the mothers, as well as for the ultimate repute of a useful, but now much misused instrument.

ERGOT AND ANÆSTHESIA IN LABOR.

The object in noticing this subject is to suggest a reason for the wide difference in opinion which exists with regard to its usefulness in obstetrics. The statement has been not infrequently made that ergot should never be used during actual labor, because it produces tetanus and permanent contractions, which are dangerous to both mother and child. The effects of any medicine vary exceedingly, in accordance

with the genuineness of the article, the dose given, and its mode and frequency of administration.

In this country, fluid and semi-solid extracts have been thought reliable. The object to be attained by its use in the second stage of labor is merely a sufficient additional impetus to render feeble and inefficient uterine contraction more regular and effective. The object when used, as it constantly is, to check post partum hæmorrhage, or as a preventive to its occurrence, is to secure full and permanent contraction. If the same doses are used for the former purpose as for the latter, is there any cause for wonder that effects result such as have led Dr. Barnes to say: "When you have given ergot, you are likely to be in the position of Frankenstein—you have evoked a power which you cannot control. Ergotism, like strychnism, will run its course." Would Dr. Barnes hesitate to use strychnine as a nerve tonic, from the fear that strychnism, as he terms it, would follow?

The dose of ergot necessary for securing contraction after delivery is not so important, provided enough is given. In providing it for the widely different purpose of strengthening insufficient uterine contraction during the second stage of labor, there is evidence of a general ignorance or carelessness as to dose and repetition. Very little has come under the notice of the writer in which reference was made to properly small and repeated doses. Leishman advises an infusion of sixty grains to six ounces of water, one-fourth to be given every ten or fifteen minutes until distinct increase of action is manifested. This is about twice the needed dose, and repeated much too often.

Playfair says fifteen to twenty grains of the powdered ergot mixed with water, or the fluid extract in doses of twenty to thirty minims will make uterine contraction more efficient in fifteen minutes, and says nothing of repetition. He does, however, remark: "Perhaps, as has been suggested, the administration of the fluid extract—five to ten minims every ten minutes until energetic action sets in—would remedy some of its risks."

Dr. Lusk advises entire abstinence from its use, unless as a prophylactic against post partum hæmorrhage. One paper only has come to the notice of the writer in which smaller doses are advised from practical experience. This is from Dr. W. H. DeCamp,[1] who declares his conviction that ergot can be safely and beneficially given for the purpose named, provided the dose is properly regulated. He states that ten to fifteen drops of the fluid extract will always excite uterine contraction, and that it must not be pushed too far, or tonic contractions may result.

The writer administered this drug for many years, in cases not very frequently seen, where the second stage of labor was retarded by insufficient contraction and no pelvic obstacle existed. He regards it as a valuable resource in such cases, and has never witnessed, in his own practice, the tetanic contractions attributed to it since he learned how to employ it. For this purpose an infusion of the freshly and coarsely powdered kernels, two grammes (about thirty grains,) to eighty-five grammes of water, of about three ounces, has been the preparation used. Of this a tablespoonful given every thirty minutes until some effect was apparent. In some cases this was obvious after one dose, in some two or three were required. In cases of nervous exhaustion on the part of the patient, a full dose of quinine was also given.

It should be added that the writer, as a rule, makes use of anæsthetics in labor, save in some exceptional cases of feeble uterine action, and that where ergot was administered and the pains become efficient, the anæsthetic was also used. How much modification of the effects of the former were produced by the latter agent he cannot positively determine, but is sure that they act well together.

Dr. Fordyce Barker, at the last American Gynæcological Society session, after enumerating the conditions in which ergot was inapplicable, stated that there were cases where it could be used with great advantage. He usually gave an anæsthetic and then full doses of ergot, and the result had generally been that labor was speedily and successfully terminated.

In this connection it might be mentioned that Mr. Fancourt Barnes claims that nitrate of amyl possesses properties antagonistic to ergot, and states that three minims of this drug, added to one drachm of ether, and taken by inhalation, will act as a sedative and anæsthetic without producing loss of consciousness, and will also subdue the trismic contractions produced by full doses of ergot.

There is no doubt that this drug has been abused, and what valuable agent in the materia medica has not? That it has been given when entirely inappropriate, with only deleterious effects. There is no less doubt in the mind of the writer that the crusade against it has been due, not entirely to its improper use, but to the fact that the fashion of ergot use has given place to the fashion of forceps use, in hastening labor. Forceps, however useful, do not take the place of ergot. The child may be speedily removed by the former, but the ergot must be given after, to prevent the hæmorrhage which insufficient uterine action is apt to induce.

The contrariety of views in regard to the usefulness of anæsthesia for the relief of pain in labor, also appears to the writer only explainable upon the supposition that it has been improperly and injudiciously used by those who oppose it. This has been before the profession between thirty and forty years, and during this whole time, and to-day, many obstetricians of eminence constantly employ it as safe, serviceable and entirely beneficial, while others denounce it as inducing post partum hæmorrhage, and various other evil effects, both upon mother and child.

The writer has previously recorded the favorable results of his own experience in its use since 1847, and can here only attempt briefly to show how such diverse opinions may be, and probably are, the result of faulty administration.

Mr. Coates, in a recent article[1] upon the true method of inducing surgical anæsthesia safely, by the use of small quantities, repeated as often as needed to produce the desired effect, uses an illustration which is even more applicable to its obstetric use. He says,

[1] *Western Medical Reporter*, October, 1881.

[1] *London Lancet*, January 27, 1883.

"the educated practitioner, who has made up his mind to give one grain of opium every hour, or twenty grains of chloral every four hours, for twenty-four hours, would hardly think it the same thing to give the twelve or sixty grains at once. There are three stages of anæsthetic effects which may be produced: First—the lessening or annulling of sensibility to pain; second—by increased dose, the abolition of intelligence; third—the abolition of mobility. The method and object of anæsthesia in surgery and labor differs very widely. In the former it is generally carried to the second if not to the third stage of effect before the pain is inflicted. For the latter it is rarely necessary to produce much more than its first effect, and this is produced "pari passu" with the pain. A little experience will soon teach the physician how to arrest its effect at this stage, or at least before the second is fully attained, and to vary the amount as may be required by different degrees of pain.

Care in administration as to the quantity employed and the length of time, and regularity, of inhalation, is the whole secret of successful use. As a rule it should not be regularly given until the beginning of the second stage of labor, although where progress at an earlier period seems delayed by the rigidity of the os, the inhalation of ether in small quantity will quiet irregular contractions, and effect a more rapid cervical expansion. After the second stage of labor is reached, inhalation should be allowed only with each pain, commencing when uterine contraction is first felt to be returning, by a finger in the vagina, or by the sensations of the patient, with full inspirations for a minute or two, until uterine contraction has reached its climax. The inhaler is then at once to be removed, and not again used until the pain again recurs. When little experienced in its use, the writer sometimes allowed inhalation to relieve feelings of discomfort or alleged pain during the intervals of uterine contraction. This resulted in irregularity of recurrence, and disturbance. He can clearly see that where the rule of administration just given is not mainly adhered to, disappointment as to general results might ensue. Not only should the time of administration exactly correspond with that of the commencing and augmenting pain, but as the labor progresses, and pain increases in severity, the dose should correspond.

There is no proof which the writer has ever seen, that used in such a manner, anæsthesia produces, or tends to produce, post partum hæmorrhages.

Dr. Barker spoke very positively upon this subject[1] when he said, last fall, that he had used chloroform in several thousand cases, and had not had post partum hæmorrhage but in one instance. He always, however, gives ergot after placental expulsion, to promote uterine involution.

It has been said to narcotize the child and lessen the favorable convalescence of the mother. The writer has seen no evidence that this is true. Where it has been used most fully and freely, the children have cried vigorously immediately after birth, and as to the mothers, the conviction was strongly forced upon him that convalescence was more rapid and perfect under its use, when compared with the previous results of six years without it. We all know how pain exhausts nervous power; this is avoided.

In conclusion, if anæsthesia ever produces post partum hæmorrhage, injury to child, or other than beneficial results, experience tells us that it must be due to the impurity of the anæsthetic employed, or to the want of that experience and discretion in its use, which is necessary not only here, but in all therapeutic measures which we employ for the relief of human suffering.

[1] Trans. Am. Gy. Soc'y, 1882.

ANTISEPTICS IN PRIVATE OBSTETRIC PRACTICE.

A few words of inquiry as to the extent and necessity of aseptic precaution in ordinary labor in private practice. A little more than a year since Dr. Robert Barnes published[1] a paper upon the subject containing many valuable suggestions. He divides toxæmia into endosepsis, autosepsis, and exosepsis, and counsels measures for the avoidance of each. With auto-infection, at present, we shall mostly deal. For the avoidance of this he gives directions for routine aseptic minutiæ, including washing out the uterus once or twice daily, with plain or carbolized water—the attendant bathing the hand in carbolic acid solutions, all chamber utensils being rinsed with the same, and a little left in them.

None of those prophylactic measures seem to the writer necessary in cases of uncomplicated labor, and some of them absolutely dangerous. Intra-uterine injections are especially so regarded, and even those of carbolic acid solutions into the vagina have not always been harmless. Dr. Minot, of Boston, a few months ago, wrote[2], that "he had been in the habit of using carbolized vaginal injections after labor, but since alarming symptoms had followed in two cases, he now only makes use of them when the lochial discharge becomes offensive." At a meeting of the New York Academy of Medicine, last March, a case was related, in which, after a week's use of uterine injections, a chill, followed by a decided rise in temperature, occurred, and Dr. Barker stated that, although he had occasion frequently to resort to this measure, it must be used with care and not too long, even in conditions which required it. He remarked that the uterine sinuses closed ordinarily within three or four days after labor, and he had seen cases where he felt convinced that the use of this means, by the Chamberlain tube, had reopened some of the blocked up sinues, and absorption of septic material had followed. In normal cases, outside of hospital service, the writer must think it bad and meddlesome practice to use not only carbolic solutions for vaginal and uterine injections, but *any* vaginal douche, on account of its tendency to remove from the bruised and excoriated surfaces an exudation which nature provides for their protection; besides, such measures as used by ordinary nurses may, through carelessness or ignorance, be made to supply increased facilities for septic contact and absorption. But whatever may be the necessity for such measures, or others, in hospitals, when the atmosphere is loaded with poisonous emanations, and however necessary strict cleanliness

[1] *American Journal Obstetrics*, January 1882.
[2] *Boston Medical and Surgical Journal*, November 23, 1882.

on the part of the attendant at all times and in all places, an experience of upwards of forty years convinces the writer that either these minute aseptic usages are unneccessary, or, that a great and sudden change has taken place in our external conditions, or in the female organization; for, during the attendance of many hundreds of obstetric cases, not unfrequently severe and protracted, in which there was very little interference with nature's powers, and no aseptic precautions observed, except cleanliness as far as possible, very few cases of child-bed fever developed, none of any gravity, and among his own patients he never saw one fatal. There is no question as to the utility of vaginal irrigation, carefully performed, in cases of fœtid lochia, when associated with rise of pulse and temperature. We have, in this case, absorption of the products of decomposition. It has been stated that the poisonous principle of septic fluids has been isolated in the form of two alkaloids. Dr. Simpson, of Aberdeen, considers this proved. This is, however, not material to our purpose; the poison is there, and in the present state of our knowledge, we have no proof that we can chemically destroy it in the human organism, by any agent which can be safely used. We can remove it, not by a syringe, but by thorough irrigation from a reservoir which affords a constant stream of water at 96°, until the fluid shows itself clear as it flows out. The material used is of little importance, provided it be harmless. Its value does not depend upon the addition of a germicide of sufficient strength to destroy bacteria, for its purpose is simply to wash away the decomposing detritus of blood and tissue. Lesions of the vaginal tract or uterine neck are more liable to absorb poisonous material than the uterine cavity itself, and hence vaginal irrigation, only, will often prove sufficient. As an illustration of this, the writer will append a condensed statement of a case furnished by Dr. N. Senn, of Milwaukee. Patient a primipara of twenty-eight years; labor tedious, and completed by forceps in the hands of a skillfull accoucheur; child born healthy; considerable hæmorrhage after placental delivery; Dr. S. saw the patient four days after, in consultation; she had had a chill two days before, and slight chills afterward, with high temperature and profuse sweating; when he saw her the pulse was 120, temperature 102½° F.; the labia, vaginal wall, and cervix, on the right side, were found deeply lacerated, and the wound filled with coagulated blood, the vaginal discharge very offensive, and the right para metrium exceedingly tender; anti-pyretic doses of quinine had failed to control the temperature; constant irrigation was advised, and performed by means of a rubber tube attached to a fountain syringe, and inserted into the vagina, so that the upper extremity reached the highest point of the wounded surface; the reservoir was suspended above the patient's bed, and the rubber tubing secured in place by strips of adhesive plasters; a solution of 5 parts of salicylic acid, 100 of rectified spirits of wine, and 895 of pure water, kept at the temperature of the body, was allowed to slowly flow through, making its exit into a bedpan, which was changed when necessary. About two gallons were used daily. The temperature fell the first day to 100° F.; the irrigation was continued four days; the wound assumed a healthy appearance, and the patient rapidly recovered without an untoward symptom.

At the meeting of the New York Academy of Medicine, April 26, D. R. Tauszky read a paper[1] upon treatment after parturition, in which he advised, for the relief of offensive lochia, accompanied by fever, syringing the vagina several times a day with a disinfectant solution, and thought uterine injections unnecessary, save in cases of internal violence, such as attend manual separation of the placenta or use of the forceps. When they are deemed necessary, prefers thymolized or simple water to carbolized water.

In a discussion in the New York Academy of Medicine, April 26, the opinion seemed quite general that septicæmia in the majority of cases originated in wounds of the vagina and cervix. Dr. Chamberlain remarked that a breach of surface anywhere in the genital canal might be causative; but "he did not deem the existence of septicæmia an indication for washing out the uterus, unless the cause could be located within that organ, though it might be an indication for washing out the vagina." Doubtless the retention of decomposing material within the uterus is, at times, the cause of septicæmia, and if the vaginal irrigations do not speedily reduce the temperature, intra-uterine irrigation may be needed. For this purpose, however, the writer believes that a very weak antiseptic solution, or even water alone, is all that is needed. The results recorded by Dr. E. Hervieux,[2] of Paris, thirteen years ago, in cases of hospital puerperal fever, seem to confirm this view.

While writing, an article by Dr. T. G. Thomas,[3] lately published, has attracted attention from its bearing upon this subject. Two severe cases of puerperal septicæmia are detailed, in which uterine injections of carbolic acid were employed; but this part of the treatment not commenced until there had been time for a full development of the autogenetic poisoning. Two days were lost after the first manifestation of the disease in the first case, and five or six in the second, before Dr Thomas saw them and commenced this treatment. The second case died twenty-four hours after. The first, a primipara, had a short and uncomplicated labor. The nurse was directed to syringe out the vagina carefully, the next day, with carbolized water, which was done. About thirty-six hours after labor the temperature was 101°, twelve hours after this 102.°5, the succeeding morning 103°, no chill having occurred, but some pain in the right iliac fossa; the same evening the temperature was 106.°5, the pulse 145. This was the condition when Dr Thomas saw her. He found a bilateral cervical laceration reaching to the vaginal juncture, and directed washing out the uterus with carbolized water. This was carried out by two physicians, who remained with her during the night, every four hours, by means of a Davidson's syringe and Chamberlain tube. The next morning the pulse had fallen to 120, and the temperature to 101°. She felt much

[1] *Medical Record*, May 26, 1883.
[2] *Traite Clinique et Pratique des Maladies Puerpèrales*, Paris, 1870.
[3] *New York Medical Journal*, March 31, 1883.

better, but had taken opium freely all night. The uterus was now washed out at longer intervals, but the temperature again rose, and again the injections were resumed every three hours. Opium was also freely administered, ten grains of quinine given every eight hours, and rubber tubing, through which a current of ice water ran, was also placed over the abdomen. The injections were continued two days, and then stopped; the temperature again rose, and they were resumed. On the thirteenth day after this treatment was commenced the intervals between the injections were made longer, and they were gradually discontinued. Is there any evidence here to show what influence the carbolic acid had in the result? We see that very active medication of another character was resorted to, and we are not informed of the strength of the injections, or whether the quantity of fluid was sufficient to thoroughly cleanse the uterine cavity, so that the fluid ran out clear at the close of the procedure. A syringe was used, not steady irrigation, and it appears doubtful whether the result was fully attained. The temperature and pulse improved after each injection, and we might suppose that the carbolic acid aided to produce this effect, had it not been observed again and again, as a result of simple cleansing, when no acid was used. It appears to the writer that the poison which had already been absorbed before the injections were begun, continued to produce its effects in the organism, more or less influenced by the powerful medication employed; possibly increased, or renewed by the frequency of the injections; certainly only modified, as far as their influence was concerned, by the imperfect washing away of the uterine contents. It is very probable that in this case the seat of absorption was the lacerated cervix, and that constant irrigation of this region, earlier begun, would have produced speedier and more decided results.

Dr. Thomas' conclusion from this case is, that puerperal fever should be treated upon as simple a plan as septicæmia of any other kind, viz.: by washing out with some antiseptic fluid the surface where the disease originated. In his language: "With some fluid which will remove the poisonous material which is being absorbed, and also, *as far as possible neutralize its poisonous qualities.*" The last part of this sentence intimates a doubt as to the possibility. Is there any evidence that an antiseptic agent can be safely used of such strength as to destroy, or neutralize, a formed poison in the tissues or cavities in the body? We know that they can be so used as to prevent the formation of such poisons, but it is necessary that this influence should be constantly present and in action, and not pass away with the morbid products which are removed by injections or irrigations. In the latter case the writer can see no cause for the relief except in the *removal* of the poisonous material.

The case is quite different with the treatment advocated by Dr. Alloway, of Canada,[1] who reports, recently, three cases of puerperal septicæmia which he treated by first washing out the uterine cavity with plain or carbolized water, and then, by means of a Sims' speculum and a tent insertor, passing a suppository of iodoform of ten, fifteen or twenty grains to the fundus uteri and leaving it there. He usually employed this procedure night and morning, and had observed no poisonous or unpleasant results.

By the use of this agent in this manner, a constant antiseptic influence is generated which should prevent the development of poisons, if it can be used safely in sufficient quantity.

Similar in operation, and less liable to objection, is the effect of the oil of eucalyptus globulus, so much lauded by Dr. Sloan[1] as a preventative of septicæmia, when it is to be feared, on account of lesions in the parturient canal from forceps or any other source. He employs it in the form of suppositories, consisting of oil of eucalyptus two parts, white wax one part, ol. theobroma two parts. Each suppository contains about twenty minims of the oil. He states that it is neither poisonous or irritating in this quantity, does not coagulate the lochia, its odor is agreeable, and it appears to aid in uterine contraction. Mr. Lister has also stated that this germicide was entirely devoid of any deleterious effects.

The conclusions which the writer thinks can be legitimately drawn from what has been presented, are, that the danger of auto-genetic poisoning after ordinary labor in private practice is not such as to demand the routine precautionary minutiæ which Dr. Barnes has suggested; that very many cases in which the lochia are offensive, are attended with, and followed by, no disturbance; and that cleanliness as thorough as can be attained, and care as to the general condition of the patient, are only usually necessary. That even in cases where rise of pulse and temperature occur, vaginal irrigation is frequently sufficient. That in cases where relief has followed the use of carbolized injections, vaginal or intra-uterine, the advantageous results do not so much depend upon antiseptic virtues as upon the cleansing effects by even a simple fluid, used in such manner and quantity as to secure entire removal of any decomposing matters retained in the uterine or vaginal cavity.

That when there is reason to apprehend absorption of morbid material by existing vaginal or cervical lesions, the suppositories of ol. eucalyptus are much preferable to carbolic acid syringing, though they may be advantageously preceded by vaginal irrigation. That if these means should not avert a rise of pulse and temperature, continued irrigation of the parts affected, by a weak solution of Condy's fluid, salicylic acid, or some similar agent, should be employed. If these do not soon lower the temperature, or if the seat of absorption appears to be located in the uterus, intra-uterine irrigation of the same character may be adopted, to the extent of washing away all decomposing material. When antiseptic intra-uterine action is clearly indicated, the introduction of iodoform suppositories will accomplish everything additional that can be done locally, in the present state of our knowledge of the subject.

[1] *Canada Medical Review*, March 17, 1883.

[1] *Med. and Surgical Reporter*, March 17, 1883.

PLACENTIA PRÆVIA.

The report of M. Hoffmeier, of Berlin,[1] upon this subject, deserves notice from its unusually favorable maternal results. He cites forty-six cases, thirty-five of which occurred in one year. Three of these were so near death from hæmorrhage when first seen that there was no opportunity for treatment. Of the remaining forty-three, six were treated by the waiting method and the tampon; in the other thirty-seven no tampon was used. Of the six treated at an earlier date by tampon, one died, two had a long and severe illness, and four of the children were dead. Of the thirty-seven others treated differently, one mother only died, and she had been treated by the tampon for twenty-four hours, and the placenta was offensive when delivered.

This is a maternal mortality of 2.7 per cent., which is much less than any previously published rate. The results for the children, even with no hurried delivery, were: Seventeen already dead, three died from perforation of the placenta, and three were premature—giving 37 per cent. of the whole living, which reaches the usual standard. The placenta was located centrally in nineteen, laterally in sixteen, marginally in eight.

In central insertions he favors perforation of the placenta and bringing the feet through. This was done in five cases, in three of which it was necessary on account of the urgency of the symptoms, and two in which the child was already dead. His practice is to wait until some symptoms of labor are present, in the shape of uterine contraction or a funnel-shaped dilatation of the cervix, then as early and actively as possible proceed to deliver. The earlier this is done the more easily version, by the combined external and vaginal method, (one or two fingers in the os,) can be effected. This version was practiced whenever possible, and the hand introduced into the uterus only when absolutely necessary; the feet having been guided to the os and there seized, firm traction made, and the hæmorrhage effectually stopped by the buttocks. This was done in thirty cases. In six—three of which were breech presentations—internal version was used, and in one, a head presentation, forceps applied. After bringing the breech into the uterine opening, the rest of the delivery should be slowly accomplished. The condition of the child may modify this rule, but must not increase the mother's risk. He says: "One must have the courage to let a doubtful child's life be lost in his hands, rather than subject the mother to an increase of danger."

He states that hæmorrhage occurred after delivery in some cases, although ergotine was given, subcutaneously, during extraction. This was easily controlled by ergotin and iced or hot water injections.

Such maternal results are certainly worthy of attention, for Mueller estimates the total mortality in such cases at not less than thirty-five to forty per cent., and Lusk states that as many as one in four die during or shortly after delivery.

Dr. E. L. Partridge, of New York, has recently reported[1] four cases of this affection, in three of which labor was induced, at full time, by the use of Barnes' dilators, in the other labor occurred spontaneously. Internal version was practised in three of the cases, the fourth, a head presentation, was delivered by the forceps, the child being probably premature, was still born. All the mothers recovered, and two of the children were saved. The relator objects to tampons, and deems the rubber bags safer and more efficient. He states that the cervix is usually soft and easily dilatable, but uterine action does not follow to the same extent as after the dilatation of a healthy cervix; the contractions are generally insufficient to drive the head firmly down, if it presents, and the use of the forceps is difficult, from the necessity of avoiding the placenta, and often from the length and thickness of the cervix; hence, almost without exception, turning is preferable As associated with the treatment of this condition, a new method of plugging the vagina may be here mentioned, which Dr. Chassagny, of Lyons, recently described to the Paris Academy of Medicine.[2] He states, that he had made use of it in two cases of abnormal insertion of the placenta, with the effect of inducing premature labor without hæmorrhage. The apparatus consists of a bladder to which a rubber tube is firmly attached. The empty bladder is introduced into the vagina, and a syphon is then connected with the tube, which allows a flow of water into the bladder from a vessel placed about two and a half feet higher than the pelvis of the patient. To prevent the expulsion of the bladder a cylindrical speculum is introduced after it is in place, which is forced out as the water enters. The act of distension separates valves attached to the sides of the speculum, which by resting upon the internal surface of the vaginal opening, occlude the outlet and prevent expulsion. The pressure of the full bladder causes abundant secretion, and soon induces rapid dilatation of the os and energetic uterine action. It is also stated that, in cases of post partum hæmorrhage, when this apparatus is introduced into the uterus and distended, it closes the uterine sinuses and determines uterine contraction, which occurring, the water is allowed to flow out slowly, until the organ is fully contracted.

PART II.

DYSMENORRHŒA.

A few remarks concerning a painful female affection, which we are all, and often, called upon to relieve. Our object is not to enter upon a full discuscussion of the etiology of dysmenorrhœa, but to question the causative influences of some conditions supposed to produce it, to suggest the close alliance of many of its ultimate determining causes, and allude to some methods of local treatment.

Anteversions and flexions have not only been shown by Fritsch, of Breslau; Vedeler, of Christiana; Herman, of London, and others, to be generally normal conditions; but both these and stenoses, once deemed principal factors in the production of this affection, are proved to rarely exist to such a degree as

[1] *American Journal of Obstetrics*, Supplement, November, 1882.

[1] *New York Medical Journal*, December 1882.
[2] *British Medical Journal*, March 3, 1883.

to prevent free egress of the menstrual fluid. They are not present in many instances of painful menstruation, and where either, or both, do exist, they are not necessarily attended by it. We may fairly assume that, although at times factors in the production of dysmenorrhœa, they are so only quite exceptionally, and, as Dr. Macan remarks, "we must look elsewhere for the cause." Perhaps we may gain a clearer idea of the usual nature of this affection, not only by reviewing some of the morbid conditions and states which have been assigned as causes, but by also noting the treatment which has proved effective, and deducing thence the character of the abnormal conditions which such measures would be reasonably supposed to relieve.

Mr. Clement Godson,[1] of London, in some remarks, about two years since, upon what is called spasmodic, or obstructive dysmenorrhœa (though he doubted the obstruction, and prefers the former term), says: "It seems tolerably certain that the most sensitive part is the so-called internal os, that portion of the uterine cavitywhich merges into the cervical canal. I cannot explainthe pathological cause why this part is so hyperæsthetic. I know, however, that the morbid sensibility can be overcome by the passage of metallic bougies." This treatment, in his hands, used about midway between the menstrual periods, was quite successful; though in some cases the difficulty returned, and he was obliged to resort to the introduction of intra-uterine silver stems, which proved curative.

This same method, the introduction of metallic bougies, was also employed quite successfully by Dr. Mackintosh, of Edinburgh, as early as 1836. His theory was that ot obstruction, although he remarks, "I believe it may sometimes depend upon inflammation of the lining membrane of the uterus, as well as inflammation in the substance of the cervix, and on the encroachment of tumors diminishing the calibre of the outlet."

Dr. Godson, after advancing valid reasons for not believing obstruction the cause of the difficulty, and yet regarding it as curable by dilatation, asks the pertinent question, "How does the dilatation relieve the dysmenorrhœa?" In reply, he remarks, I have already suggested that the pain seems due to spasm, which, at the approach of the menstrual flux, seizes upon the uterus, the endometrium of which is in a state of hyperæsthesia. The contact of a foreign body like a bougie or dilator seems to increase the morbid sensibility at first, but as the structures become accustomed to its presence, the spasm subsides. The impression left upon the endometrium, after the withdrawal of the bougies, is such as to render it less sensitive and liable to spasm. How is this explained? This he does not attempt, and it would be difficult upon the assumption that hyperæsthesia alone was the condition of the cervical mucosa. The beneficial action of the bougies would, in this case, always be transitory. But assuming hyperæmia to exist, and to cause, or at least aggravate the hyperæsthesia, an attempt at explanation can be offered. The pressure produced by bougies. tents, intra-uterine stems, dilators, etc., would not only lessen the hyperæsthesia, but effect, by frequent or prolonged pressure, a change in the hyperæmic condition, by producing absorption, or other nutritive modification of the tissues, and thus restore the lining membrane to a normal condition. This idea is in harmony with the results secured by such remedial agents. Dr. Munde says that for temporary relief he employs Ellinger's dilator; but for permanent cure, tupelo tents. The latter, by their prolonged pressure and contact, naturally produce more effective modification in the tissues.

What is the nature of the pain in dysmenorrhœa? The spasm induced by the disordered condition of the lining membrane, which was accepted by Dr. Godson, might have led him to the conclusion arrived at by Dr. C. D. Palmer, of Cincinnati[1], who regards dysmenorrhœa as essentially a neurosis. The writer fully accords with this opinion, and, if he understands Dr. P.'s remarks correctly, also with the view that in some cases this neurosis is a result of general health disturbance, of neurasthenia, anæmia, want of developement, etc. These often find relief from change of climate and surroundings, or other agencies which improve the general condition; but in other, and perhaps the majority of cases, the neurosis is the consequence of the abnormal condition of the endometrium, the mucous membrane of which is turgid, or hyperæmic, and "its sentient nerves in a state of hyperæsthesia," as a result. Even in cases where shreds are discharged the pain is still neurotic, though the false membrane acts obstructively in producing it. The most plausible explanation of the origin of this latter form, is that of Dr. Reamy—that the membrane is not a product of inflammation, but a normal one, that is usually removed by undergoing gradual change through fatty degeneration, and then forms the debris of the menstrual discharge. This solution and disintegration of the membrane is prevented by lessened vital activity, and consequent failure of the normal nutritive ehanges. This is also the view of Williams and Aveling.

Professor Heinrich Fritsch, of Breslau, in a recent article[2] upon dilatation of the os uteri, etc., ascribes dysmenorrhœa, in the large majority of young women, to a dilatation and hyper-secretion of the muciparous glands. To facilitate the passage of this over-secretion he dilates the external os, or makes small crucial incisions, snipping off the little lobes thus formed, and then employs free irrigation of the uterine cavity with weak disinfecting solutions for one or two weeks, for the purpose of reducing the over-action; he also dilates the internal os if not already patent. He speaks of other cases occurring in parous women as well as in virgins, and, although he considers most cases of this affection as of complicated origin, states that he has both temporarily and permanently effected cures by a single, and by repeated, use of his dilators.

The local agents which have been mentioned, whether mechanical or medicinal, appear to have produced their beneficial effect by acting upon the

[1] Transactions of London Obstetrical Society, 1881.

[1] *Cincinnati Lancet and Clinic*, April 8, 1882

[2] *American Journal of Obstetrics*, February, 1883.

cervical and uterine mucosa. When the bougies or stems fill the cervical canal they cause a determination of blood to the part; so much is this, at times, the case, that in the use of the stem pessary it has been asserted that some bleeding, or even a free discharge, is an indication that the application will be effective. To this same alterative effect must be ascribed the relief obtained from local excitant or mildly caustic applications to the uterine mucosa. Dr. Fordyce Barker stated, a few years ago, that he had cured cases of membranous dysmenorrhœa by dilating the os and modifying the condition of the uterine lining membrane by the introduction of pencils of iodoform.

There is another agent, which, from the experience recently published of its results, as well as from its success in the hands of the writer, appears better adapted to produce the nutritive changes in the endometrium necessary for the cure of this affection than any generally employed.

Dr. I. D. Mann says, upon this subject,[1] "The old-fashioned term, neuralgic dysmenorrhœa, still expresses all that is known of the causation of many cases. There is also often an irritable condition of the mucous membrane of the uterine cavity, which, under certain circumstances, evokes painful uterine contractions. In such cases electricity affords great relief, probably by modifying nutrition, and from the direct action of the current upon the terminal nerves. The anode is carried into the os, and the cathode applied over the ovarian regions. If ovarian neuralgia exist it can be relieved by placing the anode over the ovary and the cathode over the lumbar spine. It is inadmissable in ovaritis proper, but tenderness, with slight enlargement and absence of systematic disturbance, is probably due to passive hyperæmia, and is often quickly relieved by the same means. The relief in simple ovarian irritation is speedy and very decided."

Dr. J. S. Rockwell[2] speaks very decidedly of the beneficial effect of galvanism in what he terms spasmodic dysmenorrhœa, and, in cases where great tenderness of the os uteri and the neighboring vaginal walls existed, he ascribes the satisfactory results to the influence of this agent in relieving spasmodic muscular contractions of the os. The results are undoubted, but the writer thinks the action of this agent far more comprehensive. It brings relief, not only by removing the spasmodic action, but, which is of much more importance, by also modifying the disordered conditions which underlie the neurotic disturbance. This is probably effected by what Remak calls the catalytic action of the current.

Over thirty years ago the writer treated dysmenorrhœa upon the stenosis principle, with fair success by dilatation; farther experience convinced him that it was not the narrowness of the passage which lay at the foundation of the difficulty, and experimenting first with faradism and later with galvanism, he ascertained that even better results could be attained without any pressure upon the mucosa of the uterine neck. No record has been preserved of the cases thus treated, they weremany, extending over a period of at least thirty years. Faradism, with a moderate current was found efficient, but preference in most cases was given to galvanism; the covered anode is placed usually over the region of the lumbar vertebræ, at times over the pubis or ovaries, while the cathode, connected with an insulated sound is applied to, or carried into the uterine os; the current should not be strong, from 8 to 10 cells of a Bartlett or Fleming battery, never sufficient to produce pain or anoyance, and occasionally reversed. The sittings, from twenty to thirty minutes, should be repeated at intervals of three to five days between the menstrual periods, until a week before the expected return, then daily for four or five days. After a few applications, the next menstruation will sometimes be attended with less pain, and if continued regularly, the second nearly or quite painless; usually, however, a longer use is required, and in cases of long standing the treatment must be quite protracted. Positive proof is wanting that membranous dysmenorrhœa has been cured by this method, in the hands of the writer, but he feels quite assured, from the description of the discharge, that this was effected in some instances.

The deductions which the writer thinks may be made, are, that dysmenorrhœa is a neurosis, sometimes resulting from derangement of the general health, and especially that of the nervous system, but more often due to morbid conditions of the lining tissues of the cervix and uterine cavity, which differ rather in degree and extent, than in character or location (always excepting those caused by virulent infection) and which vary from simple hypersecretion of the muciparous glands, to hyperæmia and hypernutrition of the endometrium and escu of the uterine tissues.

In the former cases medical and hygienic measures are most essential; in the latter, the morbid conditions are relieved in the earlier stages by mechanical agents, the pressure from which produces a change in the nutrition of the affected parts, and in this stage as well as in some more advanced, by local applications which act upon the same principle and produce a like result. That faradism and galvanism not only relieve spasmodic action, but the latter especially is curative by the power it possesses, when properly and perseveringly employed, to effect such favorable changes not only in the uterine mucosa, but in the submucous tissues, and even in the parenchyma of the uterus itself, as render it a most efficient means of cure in this affection.

THE APPLICATION OF ELECTRICITY TO GYNÆCOLOGY.

Although the effects of electricity in some of its forms have been already mentioned, as a method of treatment in pelvic affections, and its manner of use partially described, the recent indications of a better recognition of its value, and of an increased disposition to investigation of its various powers, will perhaps warrant a few more remarks.

We fully agree with Professor Erb,[1] when he urges "the more extensive utilization of a curative agent which has gained for itself a permanent position, and the effect of which, for manysidedness, energy, and

[1] *London Lancet*, July 23, 1881.
[2] Lectures upon Medical Electricity, 1881.

[1] *Handbuch der Elektrotherapie*, Leipzig, 1882.

reliability, are not surpassed by any remedies with which we are acquainted."

In regard to the explanation of its action, we have, at present, little more than hypothesis. After discussing different theories, Prof. Erb concludes that our main task should now be to discover the therapeutical resources of this agent in a somewhat empirical manner, as our knowledge of the precise method in which the unquestionable therapeutic results are attained is still defective; and it is premature to limit its use, or always endeavor to make it accord with physiological premises, while we know next to nothing of the molecular disturbances of nutrition.

Professor Dujardin Beaumitz, of Paris,[1] in a lecture recently given, after speaking of the action of galvanism upon the nervous and circulating systems, touches upon the important physiological effects which we may expect to obtain from it in pelvic affections, when he writes: "Under the influence of continued currents, nutrition is seen to improve, and the vitality of tissues is restored with new energy. Although we have no absolutely scientific explanation of this effect upon nutrition, it results probably from a double action. First—that directly exerted upon the trophic nerves; second the action upon the tissue molecules of the organisms whose vital energy is increased." Remak has called this a catalytic action, to distinguish it from the electrolytic, which is destructive, by producing solution of the tissues, while the former promotes circulation and absorption by dilating the walls of the blood-vessels.

The rules for selection of the different forms of this agent for producing the best effects in varied conditions, are not fully settled. The directions of Prof. Beaumitz are brief and practical, and are based upon experience: "When we desire to modify cutaneous sensibility and nutrition in general, we make use of static electricity; when we seek to limit the action to a group of muscles, or to restore contractility to certain muscles, we use Faradism; when we wish to modify the molecular action of certain nerves, or give new activity to certain tissues, we employ the galvanic current."

A fact is recently stated to have been determined by careful experiments made by Professor Ziemssen,[2] viz: that the induced current has no influence whatever upon the frequency of force of the cardiac contractions, while the continued current most distinctly affects them. This is of practical importance, especially in case of threatening death from chloroform.

The rules just quoted are, of course, general, and only experience can teach, in our present state of knowledge, which particular form is best applicable to each case. The writer's deduction, from his own use, would be, that galvanism is more generally indicated for gynæcological use, although Faradism is efficient in some conditions. Static electricity, made recently more available by improvements in the instrument, does not promise to be as directly useful to the gynæcologist, except as an adjunct to general tonic treatment. It has been used, however, efficiently in amenorrhœa by Golding Bird and others many years since. Dr. Blackwood, of Philadelphia, has made use of it as a galactagogue, and states that it is the only form from which he has obtained beneficial results in agalactia.

In regard to the strength of the current used, as well as the frequency and duration of the application, there is considerable difference in the practice of operators. They of course must vary in accordance with the affection treated and the result desired. As a general rule, unless for the check of post partem hæmorrhage, a medium current is sufficient to produce pain or disturbance, and employed daily, or once in two or three days, for twenty or thirty minutes, is preferable, for gynæcological use, to a more powerful application for a shorter time. Dr. W. O. Stillman, in a recent article,[1] commending the general tonic effects of galvanism, remarks that its best effects are often not realized from using a too powerful current, and that in nearly all classes of cases he has observed the best results from decidedly weak ones. This is also the conclusion of Drs. Beard and Rockwell, and the writer's experience is similar.

The successfnl employment of these agents in extra-uterine pregnancy and dysmenorrhœa has been already noticed. Galvanism is also efficient in uterine subinvolution and its results. This condition has recently attracted attention as the cause of subsequent and serious uterine derangements.

We can only recognize the physiological change occurring in involution, by the gradual and nearly regular diminution in the size of the organ. When normal, according to most authorities, the uterus cannot be felt above the pubis after the tenth day, and the time necessary for the entire removal of the old tissues and their replacement by new material is estimated by A. Serdukoff, of Moscow, as eight to ten weeks. The frequency of subinvolution may be inferred from statistics similar to those presented to the British Medical Association by Dr. J. Williams.[2] He stated that of 113 deliveries in one year at the London lying-in hospital under his charge, only ninety might be considered as normal in involution at the twelfth day; that is, the uterus had then retired into the pelvis; but this does not necessarily ensure subsequent normal progress. He thinks hæmorrhage, dysmenorrhœa and prolapsus are often results of imperfect involution.

The causes retarding or checking involution are both general and local. The former can often be beneficially treated before as well as after labor. Some of the latter, as retained portions of placenta, or membranes, rents in the perineum or cervix should receive early attention, and will not be here considered. Dr. Williams says: "The prevention of subinvolution means three things: an empty uterus, a well contracted uterus, and the absence of fever." An empty uterus being secured, the indication is to produce and perpetuate normal uterine contraction. For this purpose the claims only of electricity will be now noticed, as it promises the best results, not only in the early stages, but even in the later and more confirmed conditions of uterine-hyperæmia and hyperplasia.

[1] *Boston Med. and Surg. Journal*, April 12, 1883.
[2] *New York Medical Record*, January 6, 1883, page 16.

[1] *Medical and Surgical Reporter*, April 21, 1883.
[2] *British Medical Journal*, September 2, 1882.

Its action is both local and general; and in this, as well as in many other affections where galvanism has been beneficial, the result may be ascribed not only to the favorable nutritive changes effected in the uterus, but also to its tonic power in improving general nutrition.

At a meeting of the Paris Academy of Medicine, a little more than a year since, Dr. George Apostoli read a paper in which he proposed the use of the Faradic current in all cases of labor, immediately after delivery, for the purpose of producing more thorough uterine involution and averting engorgement or metritis. In cases of normal and full-term labor, he employed it eight or ten times within about six days. In difficult or premature labor, it was continued longer. In thirty-two cases he had found it always harmless, its effect being invariably calming and sedative. It hastens convalescence by securing more rapid and perfect involution, reduces the amount of the lochial discharge, and prevents uterine deviations; but Faradism is not the best agent. Dr. Paul Helot, in November, 1881,[1] states, among his conclusions from trials of different forms of electricity, that uterine contractions can be produced by a Faradic current when the interruptions are very rapid, but that the process is painful, and should be restricted to the treatment of post partum hæmorrhage; that galvanism with the constant current, interrupted, is the best method, the pain being very slight, and the catalytic action adding to its value.

The testimony of a competent observer, Dr. J. D. Mann,[2] shows that galvanism will not only secure full involution in an empty uterus after labor, but also that in cases of subinvolution of some duration, it will effect more than any other agent in reducing and removing hypertrophy. He says, in reference to this condition: "It should be treated in the early stage, for when prolonged hyperæmia has produced hyperplasia of the areolar tissue, and the stage is reached when an excess of fibrous tissue preponderates over the muscular elements, absorption becomes a matter of grave difficulty." Again, "In dealing with an hypertrophied uterus, composed of muscular fibers infiltrated with fluid, but sparingly so with cellular growth, any method of treatment which will stimulate the nutrition of the organ, and accelerate the absorption of the morbid products, tends to promote a cure, and such is galvanism." He introduces into the uterus an insulated sound, connected with the cathode, placing the anode over the lumbar spine; a moderate current, 90 dix millevebers, is passed from ten to twelve minutes every alternate day, the current being stabile for the first half of the time, and during the last, interrupted at intervals, the strength being then reduced. The patient should remain in the horizontal position some hours after each application. If the uterine wall is so soft as to make the passage of a sound dangerous, a cervical electrode is substituted. He states that in a case recently treated, each application was followed by a temporary discharge, and slight pains of the after-pain type. The uterus was reduced to its normal condition in seven weeks.

Dr. Paul F. Munde, of New York[1], states that he has frequently used the galvanic current to reduce the hyperplastic uterus and bring on the menstrual flow; also, that in a case of large cellulitic exudation in the right pelvic fossa, which produced severe sciatica by its pressure upon the sacral plexus, galvanism, vaginal and post-trochanteric, cured it permanently in less than a week. The same author, in another paper[2], after mentioning the varied and usually unsatisfactory treatment of uterine displacements, says: "Electricity rationally and scientifically employed for a sufficiently long time, offers chances of cure in cases comparatively recent, which call for a more thorough and persistent trial." Still later, before the State Medical Society of New York, last January[3], speaking of cervical erosions and their treatment, he says: "In a few intractable cases I have found the negative pole of a galvanic battery applied by a round button to the erosion, the positive sponge being placed over the abdomen, produce a marked tendency to cicatrization. In one such case, grafting of healthy mucous membrane upon the denuded surface occurred to me, but the galvanic current finally effected a cure."

Dr. Frank P. Foster, of New York[4], has used it with relief in oöphoralgia, and concludes an article thus: "The three great remedies for chronic extra-uterine inflammation, are hot water, iodoform, and galvanism." In a private communication he states that galvanism has appeared to hasten the absorption of pelvic exudates, and that in some cases, where great tenderness existed, it has been the only local measure he has found that did not add to the patient's discomfort for the time being; that in pure ovarian pain, apart from inflammatory conditions, he has generally found Faradization more useful.

The writer would add that he has found Faradization and galvanism very useful in amenorrhœa, where general anæmia was not present, and even when the latter existed, and constitutional treatment was obviously required, has found them valuable adjuvants. He has also used galvanism with advantage in cases of cervical and uterine catarrh, and recalls one of long standing, where the beneficial effect was very marked.

We have yet much to learn of the influence of this agent, even in the conditions which have been relieved by its employment, and still more concerning its, until recently, almost unrecognized power of producing favorable modifications in diseased organs and tissues, independently of any electrolytic or destructive action. It certainly deserves attention, investigation, and more careful and thorough trial than has hitherto been accorded.

In the beginning of this paper a reference was made to the recent brilliant advances in gynæcological surgery. Prof. Heinrich Fritsch, of Breslau, begins an article upon uterine therapeutics thus: "The general surgical teaching of recent years forces gynæ-

[1] *American Journal of Medical Sciences*, January, 1883.
[2] *London Lancet*, July 23, 1881.

[1] *Am. Journal of Obstetrics*, October, 1882.
[2] *Am. Journal of Obstetrics*, October, 1881.
[3] *Medical Record*, February, 1883.
[4] *New York Medical Journal*, March, 1882.

cologists, also, to employ uterine surgery more and more, in place of *medical* gynæcology."

Dr. Angus McDonald says:[1] "We live in times when thoughtful gynæcologists cannot avoid feeling that a tendency to a too frequent resort to surgical and instrumental methods in dealing with woman's diseases is widely, and not infrequently disastrously, present." These are utterances seasonable and pregnant with meaning.

What is to be most earnestly sought by us in the future? The notable success which has attended operative gynæcology, since Lister taught the use of carbolic acid, and, by implication, of perfect cleanliness, has had a tendency to call attention away from the less demonstrative, but even more important, investigation of constitutional as well as of local medical methods. Is there not great danger that the patient search for therapeutic resources, general, local, hygienic and all others, which it should be our aim to undertake, will be comparatively neglected?

A successful and brilliant surgical procedure is very attractive; but is not a resort to mutilative surgery, though a great boon to humanity in our present state of knowledge, an avowal of ignorance, or of our inability to cure? While we hail gladly any advance in our surgical art and in the devices for lessening its mortality, we should not forget that, were our attainments in knowledge more thorough and perfect respecting the causation of diseases with which we have to deal,—were our skill in early diagnosis and treatment more sure and extensive, such disordered condition might be arrested and cured before reaching that stage which can only be relieved by the knife of the surgeon.

Our grandest aspirations should lead us to the study of the underlying morbid processes which *precede* graver deviations from the normal state in the pelvic organs. Our endeavor should be to forestall and prevent the latter, not only by rational therapeutics, but by teaching conformity in daily life with nature's laws. "Obsta principiis" should be a motto in medicine as well as in morals.

Woman has in action, for a period of about thirty years, a set of organs upon which depend the perpetuation of the race. At the time these organs begin their functional activity, the greatest care is requisite both physically, mentally and morally to secure to them freedom from injurious influences, and that proper balance of development, which shall fit the woman for her after duties. Here is work in preventive medicine for the gynæcologist, if he be, as he should be, also physician, of the most important character. At the very threshold of female life a thousand dangers beset the neophyte. To those resulting from climate and constitutional proclivities, are added, in our artificial life, the exactions of the tyrant fashion, in dress, habits and manners, with all their attendant dangers. It is here the physician alone, who, by instruction, warning and admonition, may exercise some influence in restraining and correcting habits and influences, which may render after life but a scene of illness and suffering.

The necessity of careful constitutional treatment in pelvic disease has often been urged, but does not receive the attention its importance demands. Specialism, when exclusively practiced, is apt to produce narrowness of view, its efforts for cure to be only a variation in local treatment rather than a careful study of the relations existing with functional disturbances elsewhere, which influences, if they do not produce, will intensify the local troubles. Especially is this the case with those educated as specialists "ab ovo." No one who has not received thorough training in general medicine, and has not tested, confirmed and enlarged the knowlege thus attained, by many years of general practice, is fitted for a specialist.

The human body is an entity, not a mere collection of organs. We must consider not only the local expression of trouble in the pelvis, but aim to fully understand and appreciate the relations of the various parts of the organism; to investigate the influences which general disturbances, neurotic, functional or organic have upon the generative system; which influences are sometimes primarily causative, but more often come into action when disordered parturition, or some other deviations from normal function occur. We hail everything which aids to enforce the usefulness of such studies as a harbinger of onward progress.

Such has been the tendency, for some years, of the utterances of Dr. Fordyce Barker, whose able paper, of last autumn, upon the constitutional origin of leucorrhœa, and the cure of its resulting local lesions by rational therapeutic and hygiene measures, should be thoughtfully read and re-read by every gynæcologist

A paper has been recently published, by Dr. L. C. Boisliniere, of St. Louis, which, in no uncertain tones, calls attention to general conditions as causative in pelvic disease, closing by the statement that our extreme tendency to specialize has led us to attach too much importance to pelvic lesions, and too little to the general condition. In the same direction was also an address of Dr. William Goodell, of Philadelphia, which shows that many affections of the "reproductive apparatus" are merely local expressions of their cause, general neuroses.

Time will forbid dwelling upon this all-important subject. It is only by realizing that the physician is larger than, and must include, the specialist,—that we can progress toward the goal we ultimately hope to reach. All that is new is not progress. We sometimes follow the will-of-the-wisp light of error into devious paths, from which we return, not always enough wiser for the lesson, to prevent again going astray in another direction. True progress in medicine, as in most human affairs, is not usually by a directly onward course, but rather by following a rising spiral curve, which in time brings us again quite near to the point of departure, but upon a somewhat higher plane.

"Experience teaches slowly, and at the cost of mistakes," and through long tentative efforts only, can we arrive at truth. Patient, protracted, arduous labor is necessary. We must

> "Still achieving, still pursuing,
> Learn to labor and to wait."

Like the first Napoleon, we must veto the word im-

[1] *Edinburgh Medical Journal*, July, 1882.

possible, When medical gynæcology is thus studied and practiced, the writer has confidence to believe, with the larger general and local therapeutic and hygienic resources which such research will in time develop, with closer attention to any deviation from normal functional conditions, and with the clearer and surer diagnosis which the future will bring, that the time will come when the present "brilliant triumphs" of the surgical gynæcologist will pale before the achievements of his medical co-workers:

"Kühn ist das Mühn,
Herrlich der Lohn."

DIFFUSION OF ARSENIC THROUGH THE BODY WHEN THROWN INTO THE MOUTH AND RECTUM AFTER DEATH.

BY VICTOR C. VAUGHAN, M.D., AND
JAMES H. DAWSON, PH.C.

Within the past six months there has been tried, in this State (Michigan), a murder case, in which an interesting and important question was presented to the medical experts. The facts of the case, so far as expert testimony was concerned, are briefly as follows:—Mathew Millard was accused of poisoning his wife with arsenic. The lady was taken sick about April 18, 1882. She was seen nearly every day, and sometimes twice a day, by a physician, and twice the attending physician had counsel. The lady had long been subject to uterine trouble (the nature of this trouble does not seem to have been understood by the attending physician). During her illness she vomited frequently, and, indeed, seldom retained either food or medicine. The testimony as to the symptoms manifested was so confused and conflicting that nothing could be made out of it. The attending physician thought she had fever, but he never took her temperature. The lady died May 7. After her death the husband requested the undertaker to embalm the body, so as to preserve it until a casket could be brought from Detroit. The undertaker replied that he did not know how to embalm the body. The husband then asked the undertaker to procure some poison, and he (the husband) would inject it into the body. The undertaker procured a poison (he states strychnine), and the accused claims that, aided by his brother, he injected arsenic suspended in water into the mouth and rectum. He claims to have put about a teaspoonful of arsenic into a teacupful of water, and to have injected one syringeful into the mouth and two into the rectum. The syringe which he claims to have used was an ordinary bulb syringe, with rectal tube attached.

One hundred and five days after her death the body was taken up, and the stomach and rectum placed in one jar, and a piece of the liver and one kidney in another; and the jars were sent to Prof. A. B. Prescott for analysis of their contents. (When the officers came to remove the body the husband stated that he had embalmed it.) Dr. Prescott found in the stomach and rectum together about twenty grains of arsenious oxide, and from his analysis he calculated the amount in the whole liver to be from six to fifteen grains, according to the size of that organ. Later the body was again taken up, and the brain and a part of the muscles of the calf of the leg sent to Prof. Prescott for analysis. In these he failed to find any poison.

The question asked the experts, and the one which this paper considers, was: "Granting that the arsenic was injected into the mouth and rectum in the manner claimed, could it reach the liver and other organs outside the alimentary canal?" This was the main question, and on it the experts were divided. Drs. Kedzie, Thomas, and Vaughan held that arsenic so injected after death might reach any or all of the organs of the thoracic, abdominal and pelvic cavities. On the other hand, Drs, Prescott, Duffield, and Gundrum held that arsenic would not diffuse through the body after death.

This seems to be a new question in medico-legal science, and authors have not mentioned it directly. However, whatever testimony can be found in the books certainly supports the negative of the question.

Having determined to investigate this matter, we made the following experiments:—

A large musk-rat, which had been caught by one of the students, was killed, and about 50 grains (3.24 grams) of arsenious oxide suspended in cold water was injected with an ordinary bulb syringe with rectal tube attached into the mouth and rectum. The rat was placed in a pine box and buried. After twenty-five days it was disinterred and the various organs removed and subjected to analysis, with the results shown in the following table. In this experiment we did not think to weigh the different organs.

Name of Part Examined.	Amount of Arsenic calculated as As_2O_3 found.
Kidneys,	.00095 gram.
Liver,	.01082 ,,
Lungs,	.19252 ,,
Stomach and contents,	.00686 ,,
Large Intestine,	.40339 ,,
Small Intestine,	.10157 ,,
Heart,	.02507 ,,
Brain,	.03960 ,,
Total As_2O_3 recovered,	.78078 gram.

It will be noticed that the lungs contained a much larger amount of arsenic than the stomach. Evidently the larger portion of that injected into the mouth passed down the trachea instead of going down the œsophagus—indeed, the amount found in the liver is larger than that found in the stomach. It is likely that the poison passed from the lungs into the liver. The amount found in the brain is large, but in the musk-rat the bones of the skull are thin in texture, and are not firmly united.

In the second experiment a cadaver was used. The person had been dead between two and three days when the injection was made. An unweighed quantity of arsenious oxide was suspended in cold water, and this was injected by means of a common bulb syringe, with rectal tube, into the mouth and rectum. The body was lain away in a dry cellar for twenty-five days. The various parts, as given in the table below, were then removed, weighed, and subjected to analysis. In dissecting the body it was observed that, although the cuticle had decomposed to a certain extent, the internal organs were firm to the

touch, and remained in a fair state of preservation. This was true of all the parts removed, except the brain, which was broken down to a semi-fluid condition.

The following table shows the part analyzed, its weight, the amount of arsenic, estimated as arsenious oxide, found, and the per cent. of arsenic found in the various tissues:

Name of part taken.	Weight of part.	Weight of As_2O_3.	Per cent. of As_2O_3.
	Grams.		
Right kidney	104	A distinct mirror.	
Left kidney	90	.00703	.00782
Liver	865	.08316	.00961
Lower lobe of right lung	99	.04333	.04376
Heart	370	.02199	.00594
Transverse section of colon	85	.02659	.03128
Rectum	22	1.65000	7.5000
Spleen	48	.00455	.00947
Stomach	300	2.11200	.70405
Brain	1028	.00363	.00030

It will be seen that, while the right kidney contained only an unweighable quantity, the left kidney furnished nearly as large a per cent. of arsenic as was furnished by the liver. We account for this by supposing that on the right side the liver caught up the greater portion of the arsenic passing down from the right lung, while on the left side the arsenic passed on more freely into the kidney. Contrary to what was observed in the experiments on the musk-rat, the stomach of the cadaver contained a large amount of arsenic, and it seems probable that some of the fluid thrown into the mouth passed directly into the stomach. We were surprised at finding the arsenic in the brain, and the query arises, by what avenue did the poison reach this organ? We noticed that, while throwing the fluid into the mouth at one time, when the bulb of the syringe was very forcibly compressed, a portion of the fluid returned through the nose. It is probable that some of the arsenic adhered to the roof of the pharynx and along the nasal passages, and from thence penetrated the brain.

Independently of our work Prof. Kedzie, of the Michigan Agricultural College, has made an experiment on this question, and we herewith quote his results as communicated by him to one of us in a letter.

He says: "One of our students obtained a cat which had been killed a few hours before by a gunshot wound in the head. Under my directions a quantity of arsenious oxide suspended in water was injected into the stomach and rectum, and the cat was then buried for thirty-one days. At the expiration of this time the animal was taken up, the liver, spleen, heart, and kidneys removed without contact with the contents of the alimentary canal, washed with water, and then oxidized by potassium chlorate and pure hydrochloric acid. The residue was reduced with pure zinc and sulphuric acid and the metallic arsenic collected in a glass tube. From two-thirds of the liver twenty-two milligramms of metallic arsenic was obtained, equivalent to .53 of a grain of arsenious oxide for the entire liver. The heart, spleen, and kidneys were treated together, and from them I obtained 13 milligrammes of metallic arsenic.

"There were thus obtained from these viscera 35 milligrammes of metallic arsenic, and if the whole of the liver had been used there would have been 46 milligrammes of metallic arsenic, equivalent to .89 of a grain of white arsenic, obtained from viscera which could have received this arsenic only by post-mortem diffusions from the contents of the alimentary canal. This result is directly opposed to the dictum of the older writers on medical jurisprudence, that imbibed arsenic in the viscera is proof of its administration before death."

It will be seen from these experiments that the arsenic was quite as widely diffused through the body as it would have been had it been administered during life, and had it been the cause of death. These experiments also show that in a case of suspected arsenical poisoning, if arsenic has been introduced into the mouth and rectum in the manner above given after death, the finding of the poison in the various organs mentioned in the table will be no proof that the poison was administered during life and caused death. Now, embalming fluids containing arsenic are quite generally and indiscriminately used. They are used by the physician, by the undertaker, and by others who prepare the body for burial. Some throw the fluid into the mouth or rectum, or both; some puncture the abdominal walls with a trocar and then fill the cavity with the fluid; others simply bathe the body with some soluble form of arsenic, or cover the body with cloths saturated with such a solution; others still inject a solution of arsenic into an artery. The most weighty argument yet urged against cremation is that it may be used as a means of covering up crime; but in a case of arsenical poisoning the use of an arsenical embalming fluid may be employed as a more certain method of covering up the crime than the incineration of the body would be. On the other hand, so long as the present frequent use of these embalming fluids continues some innocent person may be accused of committing murder by arsenical poisoning, and arsenic being found in the body, may suffer an unjust sentence.

In all of these experiments, not only were "chemically pure" reagents used, but these were thoroughly tested for arsenic. The tissues were oxidized with hydro-chloric acid and potassium chlorate, and the metallic mirror was obtained by the modified Marsh apparatus of Chittenden and Donaldson (*American Chemical Journal*, Vol. 2, pages 235 et seq.) In every case the gas was allowed to run from one-half hour to two hours (to prove the absence of arsenic in the zinc and sulphuric acid) before the substance under examination was added.

UNIVERSITY OF MICHIGAN, June, 1883.

THE MEDICINE AND SURGERY OF THE WINNEBAGO AND DAKOTA INDIANS.

BY F. ANDROS, M.D., MITCHELL, DAK.

The following interesting account of aboriginal medical art is just received from Dr. F. Andros,

now of Mitchell, Dakota Territory, but formerly well-known and eminent at McGregor, Iowa. Dr. Andros is said to be the grandson of Sir Edmund Andros, the British governor of New York in colonial times. He is now over eighty years of age, but writes a firm hand, and is still actively engaged in practice. He has lived nearly all his adult life in contact with the Indians. Among the Winnebagoes he was a "great medicine man," and was admitted to the lodge of their secret society, which has its signs and passwords, and is in many respects like some of the secret orders among the whites. Being thus closely intimate with the Indians at a very early day, before they were much modified by contact with civilization, his testimony as to their original medical and surgical methods has peculiar historical value.

EDMUND ANDREWS, M.D.

The Indians' knowledge of anatomy is very limited, and is mostly comparative. They have a name for all the different organs of the body. They have no idea of the functions of the lungs in the oxygenization of the blood, or of the kidneys in conveying off the nitrogenous elements from the system, and yet they know from observation that the suspension of the functions of either will be fatal to life. They are acute observers, as illustration, when a new beaver lodge is discovered, if successful in capturing the mother beaver first, they determine the number of young beavers to be looked for in the lodge. And this they determine by the number of eschars on the ovaria. They have no definite idea of the circulation of the blood, and yet know that the heart is the organ which propels the blood through the body.

As regards surgery, they never amputate.

In large incised wounds, the parts are carefully brought together and secured with sutures of animal sinew. These they remove in six or eight days. The sinew, smoke dried, is not absorbed. Union by first intention is prevented by putting a thin piece of bark between the edges of the wound, believing that the wound should first heal from the bottom. In 1853 I saw an Indian stabbed, the knife entering the lung. I dressed the wound;and had union by first intention. A few days after I saw the case again, and found the wound had been opened and air was again bubbling from it. Another case: The abdomen wounded with a knife, bowels protruding; replaced the bowels; union complete the next day. Three or four days later the wound was opened. Both patients died, victims to their ignorance.

In gunshot wounds they never explore for the ball, and never attempt the removal unless very close to the surface. They carefully clean the wound and apply a poultice of slippery elm bark or the young sprouts of the basswood, powdered and soaked in water until quite soft. The wound is kept moist with a mucilage from the bark, and is frequently cleansed by suction with the mouth.

They dress a fracture very neatly. First procure a cylinder of bark from a tree about the size of the broken limb. This is soaked in water till quite soft, then carefully adapted to the limb and suffered to dry, first securing it in position with strings of bark. They never use extension or counter-extension, and yet you seldom see shortening or deformity. I once saw a case of compound fracture of the leg, four or five inches above the ankle. Both tibia and fibula were broken, and the soft parts much lacerated. A semi-cylindrical piece of bark was procured, considerably larger than the limb. This was cut deeply on both sides at the knee, so as to bend to a slight inclined plane. This cylinder was filled with soft clay and the limb embedded in it, from the heel to the groin, except the wounded portion, which was left open. The wound was kept clean and dressed with the thick mucilage of elm bark. The patient made a rapid recovery, with but little shortening.

This case was treated by the Indians themselves, I being a simple "looker-on in Venice."

As regards the bite of snakes and the stings of insects, they seem to have no general remedy, each band usually employing a different remedy. The most common treatment for the bite of the rattlesnake is first to suck the wound with the mouth and apply the bruised leaves of the common plantain, or black snake root. They use no internal remedy. For the sting of bees or wasps they use the wild onion bruised, which, from experience, I know almost instantly relieves the pain.

Hydrophobia is not uncommon; for this they have no remedy, put the patient in a separate lodge and carefully guard him till relieved by death.

MITCHELL, D. T., July 20.

The Indian possesses a constitution of wonderful recuperative power. They are subject only to those diseases that depend on atmospheric vicissitudes and malarial exhalations, excepting eruptive diseases—as small-pox and measles, and I am inclined to the belief that those diseases are from contact with the whites. Scarlatina, diphtheria or typhus, or typhoid fever, I never saw among them, their mode of life being unfriendly to their development.

The fevers common among them are intermittent and remittent. For the treatment of these they have a routine treatment—an emetic or cathartic, followed by a vapor bath, from which the patient is immediately plunged into a cold one, or, if a pond or pool of water is not convenient, a sponge bath, using cold water, applied with a wisp of grass, after which they are covered with blankets or skins, and diaphoresis kept up for some time by the use of warm drinks—as the calamus, or some of the varieties of the mints. As a tonic they use the bark from the root of the different varieties of the willow (salix) in decoction, also the bark of the aspen, poplas tremuloides. It is rarely that they die from remittent fever. They also often use the lancet, bleeding without regard to sex, age or physical condition. This practice I think they have borrowed from the whites. For this operation they use a thin scale of flint, fastened by screw in a stick and driven into the vein, as the horse farriers used the fleam years ago. In pneumonia, bleeding is the most common remedy. In rheumatism they rely almost wholly on the vapor bath, yet I have seen the cimicifuga (black cohosh) used by them in decoction. The vapor bath is a small tent, made by bending two small poles across each other and fixing the ends on the ground, then

covering this frame with skins, several large stones being heated and placed inside. The patient is placed within, and water sprinkled on the stones, soon "raising steam."

They have no idea of the sympathy which may exist between the different organs, but locate the disease wherever the pain may be. I have frequently had them call on me for headache medicine, side-ache medicine, belly-ache medicine, etc., making no greater mistake than I have seen made by men with M.D. attached to their names, prescribing for symptoms in place of the disease. They use quite a number of the indigenous medicinal plants, having learned from experience that certain plants will produce certain effects; that chimaphila will increase the flow of urine, and that a decoction of the bark of the butternut (juglans) will produce a cathartic effect.

They have one remedy for mucus enteritis which is deserving of a trial. It is the bark of the button-wood, or american sycamore (platanus occidentalis). It is used in decoction, and is used *ad libitum*. Its taste slightly resembles chocolate, is very slightly astringent, and powerfully diaphoretic.

During the autmn of 1853 dysentery prevailed among the soldiers, and also among the Indians, as an epidemic. I watched their treatment, and found they were more successful in the treatment than I was, whether owing to their great recuperative powers, or to some other cause, I will not say. Since that time I have used the same remedy in my private practice, in conjunction with the usual remedies, and was pleased with the result. On this bark they relied solely.

Cupping seems to be one of their old remedies. You will scarcely see an Indian of any age who has not the scars of scarification about the temples or neck. The operation is performed by scarification with a scale of flint, and the blood extracted by suction with a horn by the mouth of the attendant, used particularly in inflammation of the lungs and headache. They pay no attention to diet, the sick using the same food as the other occupants of the lodge.

For poisons, snake-bites, and the stings of insects, they have no reliable remedy. The most important is suction of the wound with the mouth. I observed that the different bands each had its particular remedy. The most common are the senega snake-root and the common plantain (alisma plantago). and the yellow dock (rumex crispus). The bite rarely proves fatal, either among the whites or Indians. When death ensues it is from hæmorrhage, bleeding from the nose and gums. The poison seems to defibrinate the blood. I have probably treated over fifty cases of rattlesnake-bites, and never saw but one fatal result. Many of the recoveries were long and tedious.

The general treatment is like the treatment of typhus fever, an expectant and supporting treatment. Ammonia is one of the most valuable remedies in the early treatment, both internally and externally to the wound. Whisky, the vaunted remedy, is of very little account after the first few hours, except given with milk as a supportant.—(This is wandering from my subject, but, as I told you before, my remarks would be disconnected.)

The following is a list of the remedies in most common use:

The cambium of the different varieties of the pines, as expectorant and also in gonorrhœa; symplocarpus fœtidus (skunk cabbage), expectorant and used in asthma; Sambucus canadensis, used as a poultice; Alisma plantago (plantain), in snake bite and poison from the ivy or poison sumach; Sassafras, expectorant; Chimaphila Maculata, diuretic; Ulmus (fulva), emollient, demulcent; Asclepias Tuberosa, emetic; cortex Salicis, differferent species, febrifuge and tonic; Leptandra viginica, snake bite; Polygala senega, snake bite; Rumex crispus, snake bite; Acorus calamus internal fever; Lycoperdon bovuta (puff-ball), styptic, and in wounds to arrest hæmorrhage: Artemesia canadensis, tonic; Cortex Querci, tonic and astringent; Geranium maculatum, astringent, used extensively in diarrhœa. The bark of the button wood (Platanus occidentalis), used in dysentery. As a stimulant they use a plant, in common parlance called horse mint, and named by botanists Monarda punctata, which is of the same genus as the well-known Oswego tea. This I saw them use in cases of Asiatic cholera, which prevailed among them, using it both internally and externally—very hot. I think they were as successful as I was in the treatment.

Eruptive diseases are almost always fatal among them, the eruption being repelled by cold applications, to which they invariably resort in all cases of increased heat of the surface.

Measles is fully as fatal as small-pox among them.

If you wish to ask any particular questions, shall be happy to answer, if able to do so.

Hoping to have the pleasure of a personal interview sometime during the summer,

MEDICAL PROGRESS.

A RAMROD IN THE BRAIN—RECOVERY.—This is a most graphic and interesting account of a case, the details of which would take up far more space than we can afford to give. By the discharge of a carbine an iron ramrod passed into the right side of the back, near the fourth dorsal vertebra, upwards along the thorax, through the deeper tissues of the right side of the neck, penetrating through the skull and brain, and projecting 30 cm. outside of the skull on the left side of the head. By cutting down upon the wound in the neck, the ramrod was extracted after striking the projecting end (through the back) with a hammer several times, and the patient recovered with loss of sight in the right eye.

The patient, Mutz, was a 17 year old man servant, who was shot at a Schutzenfest by a young peasant who stood directly behind him, the ramrod in the barrel of the carbine, and by dropping the butt suddenly upon the ground the gun was discharged. The first movement made by Mutz after he was shot, was a tottering without falling, and seizing the ramrod with both hands. A comrade sprang to him, put out the fire of his clothing at the back, and laid him on the grass, where he remained ten minutes

motionless, without speaking and with his eyes shut. There were two different ineffectual attempts made by the bystanders to draw the ramrod out of the wound, raising his head and shoulders from the ground, and dragging him a short distance; following this came nausea, vomiting, a deep sigh and intelligible answers to questionings.

He was first seen by Dr. Fischer at the hospital several hours after the accident, when 30 cm. of the screw end of an iron ramrod projected from the left side of the skull, 8 cm. distant from a line perpendicular to the left supra-orbital foramen, and so tightly wedged that not a drop of blood escaped. The tissues about the angle of the lower jaw on the right side were swollen and very painful on pressure, the finger passed deep into the pharynx, found nothing abnormal. Between the right shoulder-blade and spine, on a level with the fourth dorsal vertebra, was a gunshot wound of the size of a ten-penny piece, with blackened edges, from which oozed a thick bloody fluid. He lay exhausted and apathetic with closed eyes, putting his hand now and again to the right side of the neck; but when spoken to gave proper answers, complaining of headache, pain in the right side of the neck, and of not seeing so well as usual; the pupils were dilated. From the right nostril a bloody colored fluid was discharging. He vomited a tablespoonfnl of dark red blood, and his sputa was bloody. Pulse 60; respiration normal.

The question now was how to extract the ramrod, —in the direction of entrance or from the wound of exit in the skull. As these ramrods have a thick knob at the end, it was decided to cut down on the course of the missile in the neck and so withdraw it. The operation was performed without narcosis, by an incision 6 cm. long, made from the angle of the lower jaw, on the right side to the anterior border of the sterno-mastoid muscles, the knob of the ramrod being found lying deep beneath the upper part of the muscle near its posterior border. The greater vessels were not exposed—not much hæmorrhage, only one small artery to ligate. An incision was then made down to the point of exit, and the ramrod was found to be immovable, with no fissures in the bone about it. A hammer was used for striking careful blows on the exposed end, when after a few blows the rod moved, but in the direction of the original wound, and threatened to pass into the soft parts. By changing the position of the body, and passing elevators under the projecting part, he was enabled finally to remove it. The patient was conscious during the operation, and at its close his pulse was 72; he complained only of headache. The ramrod was 50 cm. long, varying in thickness from 6 to 7 mm. On the 68th day Mutz was discharged as cured.

Symptoms—Brain.—At the moment of being shot, a tottering; in the first ten minutes he lay motionless, speechless, eyes closed, with a deep rattling in the throat. After an hour he answered questions correctly. Three and a half hours later, on his entrance into the hospital, the period of depression was over. During the operation he was perfectly conscious. After the removal of the ramrod there must have been some bleeding along the track from the wound of the dura mater at the points of entrance and exit, which was unimportant, as no symptoms of compression of the brain followed. The headache which ensued may be traced to this cause and not to meningitis, as there was no fever. This, on the third day, was severe, and on the eighth and ninth days was accompanied with constipation; then became less marked, and disappeared on the nineteenth day. Vomiting occurred only the first night and the day after the operation. Sleep became natural after the fifth day. There was no paralysis. The pulse fell to 52 on the fourth day. On the twenty-eighth day and after he could sit up for an hour at a time. His memory failed him as time passed; he could remember everything up to the time of receipt of the injury, but his being laid on the grass, brought to the hospital, and being operated on he had forgotten.

Discharge of the Cerebro-Spinal Fluid from the Right Nostril..—This continued for twelve days, at first continuously and bloody, then intermittent and of a yellow color; at times passing into the pharynx and coughed up. It never came from the left nostril.

Amaurosis of the Right Eye.—On his entrance into the hospital he complained of not seeing well; both pupils were dilated and nothing abnormal was noticed. The following day amaurosis of the right eye, with perfect vision of the left, was diagnosticated. At the sixth week a commencing atrophy of the right optic nerve was determined by the ophthalmoscope.

Suppuration of the Right Ear.—On the twelfth day Mutz complained of a pricking in the right ear, from which a slight discharge came. He heard the watch only 12 cm. removed, but very well when pressed against the bone. On the seventeenth day a suppuration was established, which soon stopped under treatment by pulverized boracic acid. In the fifth week he heard the watch one-half meter distant. In the seventh week both ears were alike.

The sense of smell was normal.

Temperature and Pulse.—On the morning of the operation the thermometer was 37.9, in the evening 38.3. In the first two weeks the morning temperature was usually 37.6, and in the evenings 38.3. In the next five weeks, morning 36.8, evening 37. Only once, on the ninth day, did the thermometer indicate anything serious. On that day the record stood, morning 38.8, midday 39.9, evening 39.9. An operation from the bowels relieved a constipation of three days standing, and the temperature was reduced. The pulse gave no special indications. The character of the patient seemed to undergo no change. His employer described him as a very good peasant, who took his punishment quietly. In the hospital he seemed phlegmatic, and careful of his health.

Direction of the Wound.—After considering carefully the various symptoms, and experimenting upon the cadaver, Dr. Fischer comes to the following conclusion as to the course of the wound: The ramrod entered the right side, opposite the fourth dorsal vertebra, between the splenius cervicis and levator anguli scapulæ, without penetrating the cavity of the thorax, and passed up the neck in front of the inter-

nal jugular vein and common carotid artery, and behind the sterno-cleido-mastoid, posterior belly of the digastric, stylohyoid, and stylo-glossus muscles. It entered the base of the skull behind the posterior border of the middle root of the pterygoid process, went through the right sphenoidal sinus and the lower portion of the alæ orbitalis, through the right optic canal, lacerating the optic nerve, and passed from the border of the sphenoid into the cranial cavity. Here the ramrod struck the right gyrusrectus, and then passed freely for some distance between the two hemispheres, on the left side of the falx cerebri; then passed between the two gyrifornicati, just in front of the anterior border of the genu of the corpus callosum, and passed through an extent of 3 cm. in the left gyrus frontalis superior, out through the frontal bone. The track of the wound is 35 cm. long.—DR. GEORGE FISCHER, *Deutsche Zeitschrift für Chirurgie*, XVII., B., 5 and 6.

CASE OF SEPARATION OF THE SYMPHYSIS PUBIS.—This occurred in a sixteen-year-old girl, who was thrown from her horse whilst riding astride on a man's saddle, and dragged some distance. When seen, a little over six weeks after the accident, she was found to be suffering from bed-sores on the back and buttocks, with a sinus in the left groin passing close to the labium. There was a copious, thick and very fetid discharge from the vagina—gritty when rubbed between the fingers. There existed a separation of the pubic symphysis of 1½ inches. On introducing the finger into the vagina the roughened edges of the pubic articulation, denuded of cartilage, could be easily made out. The finger in the vagina could be plainly felt by the finger of the other hand, placed on the mons veneris, nothing but skin intervening between the two. The orifice of the urethra was dilated and in an altered position. Six months after the accident the finger, introduced into the vagina, encountered firm bands of tendenous substance, and uniting the pelvic articulation, part of the edges of the pubic articulation could still be felt, but smooth and covered by membrane. When first allowed to walk the girl felt "loose," and a feeling as though she was falling asunder. This only exists in a very slight degree later, and is quite counteracted by a firm band round the hips. Incontinence of urine from the first and cessation of the menses.—J. S. Hayes, M.D., *Australasian Medical Gazette*, April 15, 1883.

A CASE OF CHYLOUS ASCITES.—Mr. Kien communicates to the Societé de Médicine de Strasbourg, as reported in the *Gazette Médicale de Strasbourg*, the case of an old maid of 50 years of age, who, suffering from abdominal dropsy, had been tapped by him eight times in four months, drawing off each time some four gallons of a fluid absolutely like milk in color and density. He was unable to detect any abnormal condition in the cavity itself, which was easily palpated after the removal of the fluid, or in the abdominal viscera. Prof. Recklinghausen made a microscopical examination of the fluid, and declared the case to be one of chylous acites. He found lymphatic cells—leucocytes—in different morphological conditions, some fibrinous flakes and some large cells adherent to each other in groups of two or three, with a conformation which *might* indicate cancer. He considered the fluid might come from a rupture of the chyliferous vessels of the intestine or mesentery.

PHYSIOLOGY IN ENGLAND.—Judging from the report for 1882 of Mr. George Burk, the Home Secretary, who grants licenses for vivisections, physiology must be seriously on the decline in England. The *British Medical Journal* tells us (June 16, 1883) that but twenty-six persons performed experiments, and that but between twenty and thirty animals, mostly frogs, were used. How far would twenty or thirty frogs go in a well appointed physiological laboratory?

The same journal tells us, however, of the appointment of Dr. Michael Foster as Professor of Physiology at Cambridge, with Dr. Alexander McAlister as Professor of Anatomy in place of Dr. Humphrey; and that physiology is more and more vindicating its place as the scientific basis of that part of medical science which is not purely empirical. Cambridge Uuiversity now proposes to extend elementary biology over two terms, and to make it form a more complete introduction to general morphology. Botany, comparative anatomy, and much of the old materia medica are being laid in the background as no longer compulsory studies.

RAPID FORMATION OF BLOOD TUMOR IN LEFT LABIUM MAJUS DURING LABOR—SPONTANEOUS RUPTURE—EXCESSIVE HÆMORRHAGE.—Dr. Morris A. Rodger, (*Canada Medical and Surgical Journal*, July, 1883), describes the formation of this tumor as coming on some time after the commencement of labor-pains,—when first noticed it was the size of a pigeon's egg—then increased rapidly with each pain to the size of a fœtal head and burst before the child's head had passed the brim of the pelvis. The rent took place on the inner side of the labium, and was about three inches in extent, running close down to the rectum, but not injuring the perinæum proper—bleeding was very profuse and not controlled until after a forceps delivery of the child, when fine silver wire sutures were used, passing them deeply into the neighboring tissues. There was no history of swelling in the legs, or elsewhere, and no varicosities of the perineal veins. The patient did well.

REDUCTION OF BACKWARD LUXATION OF THE THUMB.—Dr. J. F. Hubner (*Philadelphia Medical Times*, July 14, 1883) treats this condition by separating the two heads of the flexor brevis muscle with two uterine tenaculi, bending their ends to a very acute angle. He inserts them by holding them as nearly parallel as possible to the metacarpal bone, and by a circular motion inserts the curved end of the tenaculum, keeping the point subcutaneous. Next introduce the tenaculum under the head of the muscle in the same manner as you would a tenotome; then, turning the point upward, you have the head of the muscle in the elbow of the tenaculum. Insert the second one in the same manner. Now push the

heads of the muscle asunder, and allow an assistant to push the phalanx in place. In order that the tenaculi may be withdrawn easily, care must be taken not to insert them too far from the normal position of each head of the muscle, and in withdrawing to make a circular sweep of the handle.

In the report of the Committee on New Remedies to the State Medical Society of West Virginia, Dr. J. M. Lazzell called attention to the somewhat peculiar action of an old remedy: Tinctum digitalis, long continued, produces a peculiar and remarkable kind of sweat over the whole body. This is continuous and will remain several days after discontinuing the remedy. The skin is bathed in perspiration, and is shriveled and corrugated like a washerwoman's hands.

Cysticercus in the Eye.—This parasite has been found imbedded in the fundus of the eye, to the outer side of the left optic disc and projecting into the vitreous, overlapping and obscuring the inner third of the area of the optic papilla. Dr. W. J. Collins reports it in the *Lancet* as being present in a girl of six. It has produced intense hyperæmia with effusion, and severe headache. There is no movement as yet, and there are no indications requiring immediate operative interference. Probably sooner or later the eye will be lost.

Dangerous Soda Water.—Dr. George Hay (*Philadelphia Medical Times*, July 14, 1883) has been examining the soda water of a particular druggist, who himself called his attention to it, and found the water to be dangerously impregnated with copper, existing as carbonate of copper, held in solution by excess of carbonic acid, and derived from the saturators, which are in all cases made of that metal and generally coated inside with tin, which gets dissolved in time and exposes the copper.

NEW INVENTIONS.

Bloch's Maximum Thermometer.—This instrument is provided with a system of magnifying lenses, which are so attached to the tube, as to glide over its surface and allow a ready reading of minute subdivisions of the degrees.

Burq's Circular Thermometer, with Maximum and Minimum Indices.—This thermometer is intended to measure surface temperatures, and has connected with it a series of all the malleable metals which Dr. Burq calls the metallos:opic "gamut," to determine the thermic variations corresponding to metallic sensibilities.

A New Drainage Tube.—By J. Ward Cousins, M.D., London, *British Medical Journal*.—This is an elastic tube which is enclosed at one end in an elastic air-pad, to which a fine tube is attached, and by this the pad can be inflated to the required extent. The inflating tube is then securely closed with a knot or ligature. It is especially serviceable in cases or empyema treated by free incision; for, when the pad is inflated, it becomes fixed in position between the ribs, forms an elastic wedge which prevents the escape of fluid around the tube, and exerts a comfortable and even pressure in sustaining the open and dilated condition of the incision.

Professional Rewards.—The *Gazette Hebdomadaire des Sciences Medicales de Montpellier*, for June 30, 1883, tells us that Dr. Monnet last January, while passing through a certain street, went to the assistance of a drunken man whom he saw fall and injure his head. He had him taken to an apothecary's shop, gave him a medicinal mixture, and dressed his head, for which he received a severe blow with the fist. Ten minutes later the drunken fellow was walked out of the shop by a policeman. As the doctor was about to follow, the apothecary demanded 36 cents of him as the price of the mixture, which the doctor refused to pay. A few days later Dr. Monnet received two letters; one from the apothecary summoning him before a justice of the peace; the other from the police authorities, requesting him to appear and give information regarding the drunken man. The doctor, being a very busy man, neglected to pay proper attention to these letters. Consequently, in March last an officer presented himself with the intention of attaching the property of Dr. Monnet, and he found that by this time he had to pay for the sake of the law the sum of $9.96.

The Confiscation of the Entire Issue of one Number of a Medical Journal.—*The Medicinisch Chirurgisches Central-Blatt* of Vienna, has on its No. 6, for February 9, 1883, the words "Second edition," which it explains by the following notice:

"To our readers: The whole edition of No. 6 of our publication was confiscated on account of an editorial on the ministerial decree concerning the titles of surgeons. We have prepared this second edition by leaving out the incriminating article, which we now send to our subscribers, unfortunately somewhat delayed."

A similar action has been taken by the authorities with regard to a recent number (June 2) of the *Wiener Medizinische Wochenschrift*, which offended by remarks concerning the botanical garden in connection with the Josefs-Akadamie. The editors promise a second edition without a repetition of the offense.

The Mortality of the Principal Cities of Europe for the first quarter of the current year: London, (nearly 4,000,000) 22.1 per 1,000. Measles, scarlatina and whooping-cough have influenced this rate greatly. St. Petersburg, 40.6 per 1,000. Typhoid fever and diphtheria have prevailed with great intensity.

Berlin, 24.3. Croup caused the death of 663 in 1,200,000; Brussels, 25.7; Paris, 27.3; Stockholm, 27.8; Vienna, 31.1; Madrid, 36.4. Measles alone gave 402 deaths in a population of 400,000.—*Paris Médical.*

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, AUGUST 4, 1883.

YELLOW FEVER.—We gather from the secular papers the following facts regarding measures for preventing the introduction of ships and other things infected with yellow fever, into the seaports on the coast of Maryland and Virginia. The United States Hospital Marine service, under the direction of Surgeon General J. B. Hamilton, established a quarantine and sent the hospital barge Selden to Hampton Roads for the reception of yellow fever sufferers. Infected vessels were ordered to anchor about six miles out from Ocean Beach and Fortress Monroe, until relieved by the health inspector. The boats were thus brought in plain sight of the many visitors at the resorts, and caused so much uneasiness among them that an appeal was made to Secretary Folger. On consultation with the Surgeon General it was decided to call a meeting of the health authorities of Baltimore, Washington, Richmond, Portsmouth, Norfolk, Ocean View, Newport News, and Fortress Monroe, to discuss the general situation and decide upon some plan which would insure concert of action on the part of all places concerned in the emergency thought to confront them, and to obtain the benefit of all available knowledge as to the best locality for the establishment of quarantine grounds. The conference was held July 28, at Fortress Monroe. There were present Surgeon General Hamilton, Dr. Smith Townshend, President of the Washington Board of Health; Dr. George H. Benson, health commissioner of Baltimore; Dr. J. G. Cabell, President of the Board of Health of Richmond; Hon. H. Libbey, member of Congress from the second district; Col. Loder, commandant at Fort Monroe; Capt. Evans, U. S. N., lighthouse inspector; Gen. V. D. Gronor, member of the Norfolk common council; the mayors of Newport News, Portmouth, and Norfolk.

Remarks were made by those who objected to the anchorage of infected vessels off Fortress Monroe. It was thought at the conference that Fisherman's Inlet would be the best location for the quarantine station. It was resolved that "the Secretary of the Treasury be requested to establish a rigid quarantine between the capes immediately, and to continue as long as he thinks necessary," and "that the Governors of Virginia and Maryland be requested to instruct pilots of these waters to pilot all vessels coming into or through these capes from foreign ports to a point opposite the quarantine station, wherever it may be located."

Pilots present inquired whether they would be allowed to go home after piloting in a vessel with yellow fever on board. The Surgeon General said that he did not think the pilot on an infected vessel should be allowed to come ashore for several days after having taken a ship into quarantine. The United States health officer in charge must determine when it would be safe for them to leave. This was not agreeable news to the pilots, although one afterwards admitted having previously caught the fever while piloting an infected vessel into quarantine, and that he had carried the disease on shore.

The action of the conference met with the approbation of Secretary Folger. Surgeon Henry Smith and Assistant Surgeon Glennon, of the marine hospital service at Norfolk, were sent to Fortress Monroe in order to carry out the orders of the Surgeon General in reference to quarantine, The hospital barge Selden was taken to Fisherman's inlet, above Cape Charles, where the quarantine station is established.

A steamer arrived at quarantine, off Baltimore, on July 27, with four cases of yellow fever on board. She was direct from Vera Cruz, and had lost three by death during the passage. A seaman belonging to a brig from Havana died from the fever on July 25, at the Lazaretto station, near Philadelphia. It is evident that under the superintendence of the Surgeon General of the Marine Hospital service, Dr. J. B. Hamilton, the efficacy of quarantine regulations in preventing the introduction of yellow fever will be tested as fully as the existing laws of the general Government will permit.

PROGRESS OF CHOLERA.—During the past week, intelligence from Egypt to July 31 shows that the

epidemic had probably passed its crisis, as the number of deaths daily in Cairo and several other cities had diminished more than thirty-three per cent. In the *British Medical Journal* for July 21, 1883, is a report by Dr. J. Mackie, the British consular physician at Alexandria, in reference to the origin of the disease at Damietta, the place where it first made its appearance in Egypt the present season. From the facts stated in the report, it is evident that all the local causes known to favor the development of an epidemic of cholera were present in a high degree of perfection, not only in Damietta, but throughout the whole delta of the Nile. In addition to the ordinary and well known uncleanly and unsanitary condition common to all Egyptian cities, the river from which the inhabitants take their supply of water had been thoroughly contaminated with decomposing animal matter, from having been made the receptacle of the bodies of numerous animals dead from cattle disease or bovine typhus, which had been prevailing among them severely for several months. The atmospheric temperature was also unusually high at the time of the cholera outbreak. Dr. Mackie, up to the time of making his report, had not found any reliable evidence that the disease had been introduced into Damietta from the East or any foreign source. Notwithstanding some rumors to the contrary, there is no evidence that any cases of epidemic cholera have yet occurred in England or any of the European countries. But while all eyes have been turned towards Egypt as the focus from which the cholera plague might speedily find its way to other countries, the news comes to our National Board of Health that it is already on this side of the Atlantic, twenty-four deaths from cholera having been reported as occurring at Rio de Janeiro during the week ending July 26, 1883.

Dr. Roswell Park, who has been in Chicago since 1876, and until recently was Demonstrator of Anatomy in the Chicago Medical College, has received the appointment to the chair of surgery in the medical department of the University of Buffalo, and will in a few weeks move to that city, where his new duties await him, We congratulate the Buffalo school in securing a man of ability, a good scholar, and apt teacher.

The *Journal of Psychological Medicine and Mental Pathology*, has ceased its publication. It is one of the old journals connected with the last generation, and was first issued under the editorship of the late Dr. Forbes Winslow, Sr.

SOCIETY PROCEEDINGS.

REPORT OF THE SECRETARY OF THE SECTION ON PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY, FOR THE REGULAR MEETINGS, JUNE 5, 6, 7, 1883.

On June 5, 1883, at 2.30 P. M., the Section met in the chapel of the Young Men's Christian Association, 349 Euclid Avenue—Dr. J. H. Hollister, of Chicago, Illinois, in the chair, and J. G. Lee, M.D., of Philadelphia, Pennsylvania, Secretary.

After some preliminary words of welcome by the Chairman, Dr. T. W. Miller read a paper on the "Treatment of Yellow Fever," by Robert S. Murray, M.D., of the U.S. Marine Hospital Service.

The paper elicited an interesting discussion, in which several members of the Section participated. (See a very brief abstract appended to the paper in the number of this journal for July 28, 1883.) On motion, the paper read by Dr. Murray was referred for publication.

Dr. William Morrow Beach, of London, Ohio, then read an interesting paper on "Milk Sickness." Dr. A. B. Palmer, of Michigan, made some interesting remarks on the subject, after which the paper was referred for publication, and the Section adjourned.

On June 5, 1883, at 2.30 P.M., the Section convened at the Opera House, 355 Euclid Avenue—Dr. J. H. Hollister in the chair, and Dr. J. G. Lee, Secretary. Dr. Thomas N. Reynolds, of Detroit, Michigan, read a paper on "The Alimentary Canal in Bronchitis and Phthisis." After a short discussion, the paper was referred for publication.

Dr. W. F. Belfield, of Illinois, then delivered a lecture on the "Germ Theory of Disease," accompanied by microphotographic illustrations.

At the conclusion of the lecture, on the motion of Dr. Austin Flint, Sr., of New York, a vote of thanks was awarded by the section to Dr. Belfield for his interesting and valuable address. The germ theory of disease was further discussed briefly by Drs. Austin Flint, Jr., of New York, and A. B. Palmer, of Michigan.

Dr. John V. Shoemaker, of Philadelphia, Pa., then read a most interesting paper on "Mechanical Remedies in the Treatment of Skin Diseases."

On motion, this paper was referred to the Committee on Publication; after which Dr. L. B. Tuckerman, of Ohio, read an essay "On a New Method of Procuring Pure Pancreatic Juice, with Exhibition of Animal."

On motion of Dr. Hollister, the thanks of the Section were voted to Dr. Tuckerman, and his paper was referred to the Committee on Publication.

On motion, the Section adjourned.

On June 7, 1883, at 2:30 P. M., the Section met in the Opera House, on Euclid avenue, Dr. J. H. Hollister in the chair, J. G. Lee, M.D., Secretary.

Dr. Wm. M. Beach, of Ohio, begged leave to state that his friend, Dr. H. G. Sharp, of Ohio, not being able to be present, his paper on "Is Croupous Pneumonia an Essential Fever, and is Blood-letting De-

manded in its Treatment?" which had been entrusted to him, would have to be referred to the Committee on Publication, without being read.

In accordance with the rules of the American Medical Association, the Chairman announced that he would appoint Dr. H. A. Johnson, of Illinois, Dr. A. B. Palmer, of Michigan, and Dr. Walter Hay, of Chicago, members of the committee to which the papers not read before the Section should be referred, Dr. Johnson to act as chairman.

Dr. Henry A. Martin, of Massachusetts, being momentarily absent, his paper on "Vaccination, and Propagation of Vaccine Virus," was deferred; and Dr. J. Solis Cohen, of Pennsylvania, read a paper on the "Elements of Prognosis and Therapeutics of Laryngeal Tuberculosis," upon terminating which, Dr. Cohen exhibited some handsome colored plates, illustrative of the facts set forth in his paper.

On motion of Dr. Fairbanks, of Michigan, a vote of thanks was extended Dr. Cohen for his valuable and instructive paper, which was then briefly discussed by Dr. Hollister, and referred to the Publication Committee.

Dr. Henry A. Martin, of Massachusetts, then read a paper on "Vaccination and Propagation of Vaccine Virus." Dr. Mitchell, of Rhode Island, corroborated Dr. Martin's statements, and gave the Section the benefit of his experience in using the proper sort of vaccine virus.

On motion, Dr. Martin's paper was referred to the Publication Committee.

Dr. James C. Wilson, of Pennsylvania, being absent, his paper on "The Specific Treatment of Enteric Fever" was omitted from the proceedings.

Dr. A. T. Keyt, of Ohio, then read a paper on "Diminution of Retardation of the Pulse in Aortic Insufficiency." During the discussion which followed, Professor Palmer, of Michigan, said that Dr. Keyt's paper was worthy of the highest praise, sentiments in which he was joined by Drs. Hollister and Scott. Upon motion of Professor Palmer, the thanks of the Section were voted to Dr. Keyt, and his paper was referred to the Committee on Publication.

Upon motion of Professor Palmer, of Michigan, a vote of thanks of the Section was extended to the Chairman and the Secretary for the admirable manner in which they conducted the meetings of the Section.

On motion, the section then adjourned *sine die.*

MEDICAL SOCIETY ITEMS.

WE have received the following preliminary announcement relating to the American Public Health Association, and commend it to the attention of our readers:

This Association will hold its eleventh annual session at Detroit, Mich., commencing Tuesday, Nov. 13, 1883, and ending Friday, Nov. 16.

The following subjects are chosen for special consideration at that time:

I. MALARIA.—Its etiology, its American history, its specific particles, its origin, methods of prevention, etc.

II. FOODS.—Their adulterations; healthy or deleterious modes of preservation, and the function of legislation in regard to them. Ascertained facts as to adulterations in this country; facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

III. VITAL STATISTICS.—Methods and results; defects apparent; how foreign modes of tabulation are to be followed; systems of collection and classification; race vitality and the care of population as indicated by statistics.

IV. The control and removal of all decomposable material from households; the mechanical laws, constructions and appliances relative thereto; the construction of all inside pipes and their connections, their traps and syphonage; flushing; ventilation; how they shall be connected with out-door receptacles, and yet be free from ill effect.

The executive committee desires to secure facts and opinions as to practical methods of dealing with the interest of the public health. Reasons for the views entertained, the results of experience, and the best judgment as to preventive and restrictive measures are especially sought.

Methods and systems of physical education, drill, etc., feasible in the school-room, will be discussed. While papers of merit on other topics are by no means excluded, it is believed wise to concentrate the preparation of papers and discussion upon these topics.

The special committees on compulsory vaccination, the management of epidemics, and on diseases of animals, will, before the completion of their reports, be glad to receive communications from any who have facts or opinions bearing on these subjects.

The executive committee feels warranted in saying that the meeting promises to be one eminently inviting and profitable, and urges the attendance and cooperation of physicians, engineers, architects, teachers, and all those interested in the advancement of public health and physical well-being.

Inquiries of a local character may be addressed to Wm. Brodie, M.D., Chairman Local Committee, Detroit, Mich.

A later notice giving such detailed information as to local points, programmes, transportation, etc., as may be available, will be issued in due season before the meeting.

THE fifty-first annual meeting of the British Medical Association was held at Liverpool July 31, August, 1, 2 and 3. Its presiding officers for the year 1883, were, President, Thomas Lawes Rogers, of Rainhill; Vice Presidents, George H. Savage, of London, and David Yellowlees, of Glasgow.

THE sixth annual meeting of the American Society of Microscopists will be held in Chicago next week. The opening session will be at the Weber Music hall and the regular meetings at the College of Pharmacy, corner of Van Buren street and Michigan avenue. The following is a list of the papers which are to be presented so far as yet received: W. H. Birchmore, Carbondale, Kan., "Some Notes on Embolism in Pigs;" Thad. S. Updegraff, Elmira, N. Y., "A List

of Hitherto Undescribed Infusoria;" A. H. Chester, Clinton, N. Y., "A New Method of Dry Mounting;" George E. Blackham, Dunkirk, N. Y., "On the Relation of Aperture to Amplifying Power in the Selection of a Series of Objectives;" W. A. Rogers, Cambridge, Mass., "A Critical Study of the Action of Diamond in Ruling Upon Glass;" W. A. Rogers, Cambridge, Mass., "Report on the Standard Centimetre Prepared by the United States Bureau of Weights and Measures;" W. C. Brittan, "On the Laminate Structure of Dentine;" W. H. Birchmore, "Details of a Neoplasm;" M. L. Holbrook, "The Termination of the Nerves in the Kidneys;" J. T. Brownell, Mansfield, Pa., "A Basis of Natural Classification of Plants Founded on Their Seeds;" J. T. Brownell, Mansfield, Pa., "The Eureka Turn-table;" George E. Fell, Buffalo, N. Y., "Effects of Ozoon on Bacteria;" D. S. Kellicott, M.D., Buffalo, N. Y., "Some Parasites of the Crayfish;" D. S. Kellicott, M.D., Buffalo, N. Y., "An Improved Aeroscope;" F. M. Hamlin, Auburn, N. Y., "Microscopical Examinations of Seminal Stains on Cloth;" C. M. Vorce, Cleveland, O.," "On Organisms Found in the Waters of Lake Erie;" A. M. Bleile, Columbus, O., "Further Notes on the effects of the Division of the Vagi;" H. L. Smith, Geneva, N. Y. (title of paper not yet given); Allan Y. Moore, Cleveland, O., (title of paper not yet given); L. M. Eastman, Baltimore, Md., "On Some Egglike Bodies in the Liver of Rabbits."

At the recent meeting of the American Otological Society, Dr. C. H. Burnett, of Philadelphia, was made President for the ensuing year; Dr. J. S. Prout, of Brooklyn, Vice-President; Dr. J. J. B. Vermyne, of New Bedford, Secretary and Treasurer.

The American Dental Association meets August 7 at Niagara Falls. Its officers are—President, W. A. Goddard, of Louisiana; Corresponding Secretary, A. W. Harlan, of Chicago; Recording Secretary, Geo. A. Cushing, of Chicago.

The officers elect of the American Ophthalmological Society are, President, Dr. H. D. Noyes, of New York; Vice-President, Dr. W. F. Morris, of Philadelphia; Secretary and Treasurer, Dr. R. H. Derby, of New York.

The National Dental Association will meet August 3, in Washington, D. C. President, J. B. Rich, of New York; Secretary, R. F. Hunt, of Washington.

From the 25th to the 28th of September a society of alienists will meet at the asylum, Nueva-Belen, near Barcelona.

The Sanitary Institution of Great Britain will hold its meetings from the 25th to the 29th at Glasgow, Scotland.

REVIEWS.

Guy's Hospital Reports, Vol. XLI.—The annual report of Guy's Hospital for 1882 begins its pages with a memorial biography of Joseph Towne (by Thomas Bryart), modeller to Guy's Hospital for fifty-three years. It seems that his first work of importance was done at the age of seventeen years, in secret and by night, with the dim light of a candle. It was the model of a human skeleton, and was built up from drawings taken from books, and from such specimens of human bones as could be obtained in a then remote country village, was exhibited at the Society of Arts in the year 1826, and won the first gold medal of the Society. It brought Mr. Towne directly under the notice of Sir Astley Cooper, who accepted him as his *protégé*, and led to his employment by Guy's Hospital, where his works, to the number of a thousand, testify to his industry and faithfulness to true scientific representation and the principles of art. Calcutta, Madras, Bombay, New York, Alabama, New South Wales and Russia also possess many fine specimens of his work. He executed several successful models as a sculptor, as a bust of Sir Astley Cooper, of Dr. Thos. Addison, an equestrian statue of the Duke of Kent, and others, but found it necessary to give up the work of the sculptor, as it interfered too much with his modelling. He also delivered a course of lectures at Guy's Hospital, on the Brain and the Organs of the Senses and of the Intellect, contributing valuable and suggestive papers on the Stereoscopic Theory of Vision, etc. He died June 25, 1879.

Dr. C. Hilton Fagge reports a case of phosphorus poisoning, with recovery, under the administration of turpentine. The patient swallowed half a sixpenny bottle of Cooper's phospho-paste mixed with whisky. He came under treatment first by emetics, two and a half hours after taking the poison. The emetics evidently assisted in the removal of much of the phosphorus, when he was put upon the turpentine treatment, leaving the hospital in ten days time.

Dr. W. Hale White reports a case of symmetrical softening of the corpora striata, followed by bilateral descending degeneration, with secondary anterior poliomyelitis, and Dr. George H. Savage discusses several cases of exophthalmic goitre with mental disorder.

Dr. W. Arbuthnot Lane, in giving cases of empyema in children treated by removal of a portion of rib, considers that a portion of rib or ribs be removed at first, in this disease, and the cavity thoroughly drained from the beginning, in none of his cases, except one, did he have any trouble with the growth of bone interfering with the opening except in the first one. He divides the periosteum longitudinally, turns it off the rib, and then removes a piece about three-quarters of an inch long with the cutting forceps.

An account of abnormalities observed in the dissecting-room of Guy's Hospital, by Drs. Carrington, Horrocks and White, makes us wonder why more of this sort of work is not done by our own men. No one can pass a season in the dissecting rooms of any of our colleges without observing something that is worthy of permanent record as anomalies. Our demonstrators of anatomy should all of them be compelled by their respective Faculties to keep such a record as a report of work done, which they could publish afterwards to their own credit, and add valuable material to the cnrrent literature.

Drs. Golding-Bird and Mahomed give two cases of

pulsating tumor at the root of the neck. One was aneurism, but was accompanied with peculiar symptoms. The other was a post-sternal abscess, which simulated aneurism. The sphygmographic tracings taken in connection with these cases are interesting features of their reports.

The surgical affections of the tongue, by Thomas Bryant, forms an admirable grouping, with illustrations, of a variety of cases, and among other things illustrates the connection of syphilis with cancerous disease of the tongue.

Mr. Samuel Wilks, in a paper on Hemianesthesia, gives cases with metallotherapie. He admits certain facts observed in connection with the cure of anæsthesia by metals, but has as grave doubts as to their modus operandi as he has to the correctness of the theory as to the supposed seat of the disease. He finds a difficulty in distinguishing between men and women in respect to considering this disease a functional disorder, as the hysterical phenomena show themselves also in the male, with the same kind of mental and moral perversity as exists in women. In one case he makes the following comment: "The case exemplifies what every medical man must have seen, not only that in hysteria and some nerve disorders medicine is useless, but that it often does positive harm. Whilst this girl was under treatment she made no improvement, and when the case became interesting, on the introduction of the new system of 'metallotherapie,' all chance for her was gone. Neglect was the treatment she needed. It was more than she could withstand. Her reflections, on finding herself in bed for a fortnight with no one caring for her, roused her dormant will, and was, therefore, exactly the stimulus she wanted."

Dr. Goodhart reports four cases of what he calls saturnine lunacy; and Dr. Davies Colley gives cases of acute gonorrhœal rheumatism, considering that this disease occurs as often in females as in males, if not more often, and that its favorite seat is the fibrous tissue of the elbow joint.

Mr. Jacobson discusses enchondromata of the salivary glands; and Dr. Pye-Smith, in a long and valuable article, gives a case of idiopathic anæmia of addison, with a commentary and tables of selected cases, which is a valuable monograph in itself, as it thoroughly covers the ground and gives a full bibliography of the subject,

Dr. Thomas Stevenson, under the head of poisoning by aconitine, gives the details of the case of poisoning by Dr. George Henry Samson of his brother-in-law, Percy Malcolm John, which excited much interest in 1881. A full description of the analysis of the viscera follows, with an account of aconitine and cases of poisoning by the use of the drug.

Golding-Bird, in giving laboratory notes on the working of the histological class, sets down what he considers the best and shortest way of preparing tissues, cutting and staining sections, etc. He gives an excellent cut of the ether microtome.

Cases of paralysis of the abductors of the vocal cords are recorded by Dr. Frederick Taylor, in which he illustrates both organic and functional affections. In the first he recognizes the unexplained fact that in injury or disease of the roots or trunks of the pneumogastric, spinal accessory or recurrent nerves, the abductor filaments are liable to become affected sooner than the others, and may be affected alone. Two of his functionally affected cases illustrate the fact that dyspnœa and inspiratory stridor from approximation of the vocal cords, may occur as a temporary affection, which is not spasmodic, and has not for its remote cause an organic lesion, but probably some conditions of nerve failure, as hysteria or exhaustion.

Dr. Carrington, under the head of Multiple Small Abscesses of the Liver, records thirteen cases at considerable length, and Dr. Golding-Bird discusses Pes Valgus Acquisitus, Pes Pronatus Acquisitus and Pes Carus. Dr. Thomas Stevenson discusses lead-poisoning, and Dr. Branley closes the volume with an article on the vitreous body in its relation to various diseases of the eye.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA. Held at Grafton, May 16 and 17, 1883.

PROCEEDINGS OF THE EIGHTH ANNUAL SESSION OF THE SOUTHERN ILLINOIS MEDICAL ASSOCIATION. Held at Sparta, Ill., May 9 and 10, 1883.

These are two pamphlet volumes containing a record of the proceedings of each society. In the latter no papers are printed. The proceedings as recorded consisted of questions and answers from various members of the society upon very common subjects. The utility of a printed record of this kind is limited entirely to the members of the society.

In the former the first twenty-four pages contain a record of business transacted, an enumeration of the papers read, and, very briefly, the comments made upon them. The remaining sixty pages give: The Address of the President, Dr. B. W. Allen, of Morgantown; the Report of the Committee on Epidemic Diseases, by Dr. R. W. Hall, of Mannington; the Report of the Committee on New Medicines, by Dr. J. M. Lazzell, of Fairmont. A short but most excellent article follows these by Dr. E. C. Myers, of Wheeling, on the "Germ Theory of Disease." He briefly, but impartially, and very thoroughly reviews the subject, pointing out facts, and distinguishing carefully between what is supposed and what is true or demonstrated conclusively. The next paper is by Dr. D. P. Morgan, of Clarksburg, on the "Abuse of Ergot in Obstetric Practice." Dr. G. H. Carpenter, of Moorefield, discusses "Insanity as a Disease," and urges the general practitioner to study this subject with greater care, and not to leave it so much in the hands of specialists. If this were done asylums might not be so well filled, and, at the same time, there would be fewer insane persons in the community. "Puerperal Fever and Its Treatment by Intra-Uterine Antiseptic Irrigation," is ably considered by Dr. S. L. Jepson, of Wheeling. He has carefully culled the opinions of the best authorities on the subject, and presents the matter clearly and logically for consideration by the reader. The two last papers are "Report of a Case of Intra-Peritoneal Hæmatocele," by Dr. R. W. Hall, of Mannington,

and a "Record of Some Anomalous Obstetrical Cases," by Dr. C. F. Ulrich, of Wheeling.

BACTERIA AND THE GERM THEORY OF DISEASE; by Dr. H. GRADLE. Chicago: W. T. Keener; 1883.

This volume comprises eight lectures delivered at the Chicago Medical College by Dr. Gradle, Professor of Physiology in that institution.

In this work it was evidently the writer's aim to present a clear and concise statement of the facts which have been established concerning the germ theory of disease; and not only this, but also to describe the methods which have been employed by the principal investigators in the elucidation of the manifold mysteries in which this interesting and important subject is involved. By succeeding in these regards, as he certainly has done, he has given his readers a volume replete with interest, and has enabled them to judge for themselves of the reliability of the testimony which has been advanced for the substantiation of the theory.

The subject is systematically and thoroughly dealt with from beginning to end, but, while criticism is freely employed, it is, nevertheless, so fairly done and is so free from all personality, that the writer cannot be accused of undue prejudice, although it is clearly evident that he is inclined to adopt the most advanced views with regard to the etiology of the diseases which are discussed.

The reader's attention is first directed to the universality of microscopic parasites and their relation to putrefaction and fermentation, the accomplishment of which is regarded as the life work of living beings. In the second lecture the microscopic examination of bacteria is fully considered, and their structure, habits, and modes of reproduction are described. The third lecture is occupied with further considerations of bacterial life, and a discussion of the agencies which are at work in nature for the accomplishment of their destruction. Lecture four considers bacteria with reference to their relations to the animal body, both in health and disease, and discusses the results of protective vaccination against chicken-cholera and charbon. The fifth, sixth and seventh lectures treat of the relations of bacteria to each of the several constitutional diseases with which they have been regarded as causatively associated.

With regard to tuberculosis, the author takes the ground that the presence of characteristic tubercle bacilli in the sputum is one of the most constant signs of the disease, for the bacilli can be found, as he asserts, in the sputum of at least 90 per cent. of phthisical patients. The author himself, who is an enthusiastic investigator, and has given much careful attention to the examination of bacteria, found the bacilli in 35 consecutive cases of tubercular patients. He admits that the tubercle bacilli are not always to be found, but asserts that no one has as yet been able to show that the disease can ever exist without the presence of the bacillus tuberculosis

In this connection mention is made of Spina's experiments, which have recently been published as a complete refutation of Koch's work. To meet these objections to Koch's theories, the latter is quoted to the effect that Spina's experiments show a lack of skill and familiarity with the proper methods of investigation, while his results are substantiated merely by the effects produced by the inoculation of two rabbits, Koch's assertions, on the other hand, being based on the results of researches involving over two hundred animals of various kinds.

The final lecture is devoted to a consideration of the local diseases which may be regarded as of bacterial origin.

Taken as a whole, this is a work which redounds greatly to the writer's credit. No extreme grounds are taken, but the evidence is carefully epitomized and candidly placed before the reader. To those who are unfamiliar with the amount of painstaking labor required by the men who make it their work to investigate this most difficult subject; it will come as a pleasing revelation, while by that more numerous class which has long been more or less acquainted with the results of microscopic investigation, it will be welcomed as a highly interesting summary of all that has been accomplished in this direction up to the present day.

ALCOHOL AS A FOOD, A MEDICINE, A POISON, AND AS A LUXURY, by George D. Pitzer, M.D., of St. Louis. This is a pamphlet of sixty-one pages, written in any easy and readable style, well adapted for popular use. The more important views of the author regarding the effects of alcohol and its uses may be gathered from the following quotations from the closing paragraph of the essay: "It (alcohol) is not, nor can it be, a substitute for food. But is a poison greatly to be dreaded, and can be used as a medicine only in skillful hands, and then, in many cases where it is still used, other drugs recently introduced are far more effective, besides a great deal safer. It has no power to avert disease when taken as a beverage in health, but on the contrary, it renders people more liable to be attacked, and its continued use greatly reduces their power of endurance, and they are not nearly so able to resist disease when it comes."

ELECTRICITY IN MEDICINE AND SURGERY, by Geo. C. Pitzer, M.D. The author of this little book is a professor in an eclectic medical college of St. Louis; but that need be no reason why his book, if a good one, should not be read. The first part is occupied with simple descriptions of electrical machines. The rest is a brief consideration of electro-therapeutics. Many extended quotations are made from good authors, and a few cases are detailed by the author in illustration of the good and negative results of treatment by electricity. From the work one could not get a thorough nor a very satisfactory knowledge of the subject, although, by its guidance, he might use electricity in his practice with success.

BOOKS AND PAMPHLETS RECEIVED.

The Hydatiform Mole, by J. P. Miller, M.D., (Reprint).

The Electric Light in Surgical Diagnosis, by Roswell Park, M.D., (Reprint).

Report of the Health Officer of the District of Columbia for 1882.

Berichte des Naturwissenschaftlich-Medicinischen-Vereins in Innsbruck, XI Jahrgang 1880-'81.

Perinaphric Abscesses, Roberts (from *American Journal of Medical Sciences*), April, 1883).

Double Synchronous Amputation of Lower Extremities in Five Cases of Railroad Crush. By E. H. Woolsey. (From Transactions of State Medical Society of California, 1883.)

Therapeutic Value of Cephalic and Spinal Electrization. By C. H. Hughes.

A Physical Analysis of a Legally Sane Character. By C. H. Hughes.

The Simulation of Insanity by the Insane. By C. H. Hughes. (From *Alienist and Neurologist*, 1883.)

Proceedings of the Eighth Annual Session of the Southern Illinois Medical Association, 1883.

MISCELLANEOUS.

THE first annual supper of the Chicago Dental Infirmary occurred at the infirmary, Nos. 22 and 24 East Adams street, July 31. The infirmary has been open a year and is doing excellent work. The officers are: James A. Swasey, President; A. W. Harlan, D.D.S., Vice President; Eugene S. Talbot, M.D., D.D.S., Recording Secretary; Truman W. Brophy, M.D., D.D.S., Corresponding Secretary; Edgar D. Swain, D.D.S., Treasurer.

The institution is incoporated under a general law of the State of Illinois, and is authorized to give instruction in the specialty of dental surgery. It is empowered also, to confer the degree of Doctor of Dental Surgery. This degree will be conferred only upon persons holding a degree in *medicine* from colleges recognized by the Illinois State Board of Health. Matriculates intending to take the degree of doctor of dental surgery must hold a degree in medicine or be pursuing studies to that end in some reputable medical college.

It is the hope of the founders of this institution, that in time all dentists will be graduates in medicine as well as skilled in their specialty. The Infirmary affords clinical advantages for the study of dentistry, while it is expected that at the same time its students will attend some one of the regular medical colleges of this city.

DR. BROWN-SEQUARD, on account of his labors in physiology, has been awarded by the Royal College of Physicians, the gold medal which was founded in memory of Dr. Baly.

NECROLOGICAL.

MCDOWELL, GEORGE MONTGOMERY, M.D., of Barnesville, Georgia, was born in Pike county, Georgia, July 26, 1834, died at his residence, July 22, 1883. He was the son of Charles and Elizabeth Heard (Crain) McDowell. His education was derived from private tutors and at the Pike Academy. His medical degree was conferred after due attendance on lectures at the Jefferson Medical College in Philadelphia, in 1855. The same year he began practice in Barnesville, but in 1857 removed to his plantation. In 1860 he resumed general practice. The war between the States breaking out, he raised a company in the 4th Georgia Battalion, which he commanded as Captain, and in which position he was both popular and brave. But the demands were so general for his medical services by all who knew him, that he was induced by General Bates to give up his command and accept the commission of Chief Surgeon of his division, which position he held until near the close of the war, when he was promoted to Medical Director of the Western Army. Dr. McDowell was a member of the Middle Georgia Medical Association, of which he was Vice-President in 1874, and President in 1875. Also, he was a member of the Georgia Medical Association, and of which he was President in 1871 and 1872, and a member of the American Medical Association in 1879. He was active and influential in the organization of the State Board of Health, which was organized in 1874. In 185[illegible] Dr. McDowell was united in marriage to Sophrona L. Mays, of Barnesville. His wife and five children survive him. He was a member of the Knights of Honor, Royal Arcanum and A. O. U. W., which secures to his family about $7,000. The business houses in Barnesville were closed until 12 o'clock on the morning of his funeral, and almost the whole population joined in the service and cortege to the Methodist cemetery. J. M. T.

NEWMAN, S. T., born in Mississippi, November 30, 1816, died suddenly of apoplexy at his residence in St. Louis, Mo.. July 15, 1883. While a child his parents removed to Kentucky, and he received his education at Augusta College. His medical degree was received from the Transylvania University at Louisville in 1839. He began practice at Amsterdam, Miss., where he resided five years, when, on account of his health, he removed to Richmond, Ky., where he remained till 1856, when he was induced to take up his residence in St. Louis. Here in his new field he acquired a large and responsible practice, and was popular both with the public and the profession. He was a member of the St. Louis Medical Society, and its President in 1860. A member of the American Medical Association in 1873. J. M. T.

WARDER, JOHN A., M.D., born in Philadelphia, 1813, died of paralysis at his residence in North Bend, Ohio, July 14, 1883. He was a graduate in medicine in the Jefferson Medical College, Philadelphia, in 1836. Before graduating in medicine he had removed to Ohio. For years he held the Chair of Chemistry in the Ohio Medical College. He was a prominent member of the American Forestry Congress, and was a writer of note—author of "Hedge Manual," 1858; "American Pomology," 1867; edited *Botanical Magazine and Horticultural Review*, and hass coutributed largely to periodical literature. A member of the Ohio State Medical Society, and, by invitation, a member of the American Medical Association in 1867. J. M. T.